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Coal Dumping

September 30, 1957

# RAILWAY AGE *weekly*

“What does the brass expect from M/W men?”

“Where are the new freight cars coming from?”

“How do you split up your signaling dollar?”

... SEE

## CONVENTION REPORTS

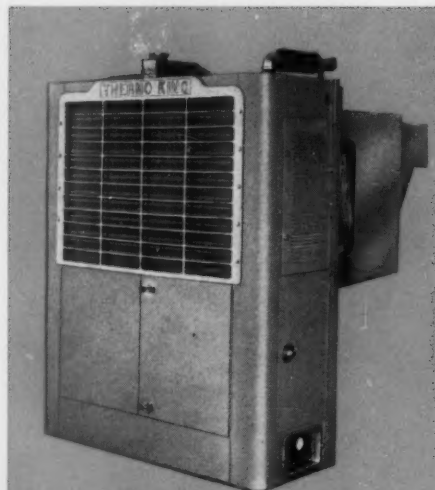
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## Week at a Glance

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### What makes a good traffic salesman? .....p. 9

The ideal freight traffic solicitor, says W. J. Sullivan, traffic director of the Allied Chemical & Dye Corp., is one who thoroughly knows his railroad and the extent to which it can serve its customers. Mr. Sullivan, addressing the N&W's annual traffic department conference, added that such a salesman "is not afraid to tell me when I can't have my own way."

### PRR may lease new locomotives .....p.10

Bids have been requested by the railroad for the supply of 200 diesel-electric units on a purchase-for-cash and a 15-year lease basis. The PRR's action comes in the wake of persistent reports that a leasing arrangement might enter the locomotive financing picture. The bids are to be opened October 3.

### Where are the new freight cars coming from? .....p.13

Car supply, hot boxes and economy fuel were foremost among the operating problems discussed at the 1957 annual meeting of the four Coordinated Mechanical Associations. Details of the "Symes Plan" that would create a government agency to purchase equipment for long-term lease to the railroads were presented to the meeting by J. P. Newell, PRR vice-president.

### Lethargy—'Curse' of the railroads .....p.14

Far too many railroad officers are content with the status quo, the Southern's Brosnan told last week's joint session of the annual conventions of the Roadmasters' and Maintenance of Way Association and the American Railway Bridge and Building Association. "Our industry will fail," he added, "unless such attitudes are promptly changed."

### How TV speeds coal dumping .....p.18

Operations have been speeded up at the Jersey Central's Pier 18, on the Jersey City side of New York Harbor, through installation of car retarders and power switches, aided by closed-circuit television and talk-back loudspeakers.

### Tips on conducting investigations .....p.22

A new book by I. L. Fardal is reviewed. It spells out some ideas gleaned from a study of National Railroad Adjustment Board proceedings on cases ranging from safety compliance to Rule G.

### 'No-hands' for materials handling .....p.24

An electronically operated tractor which goes about its business unattended already has attracted the interest of at least two railroads. When positioned over a wire buried in the floor and turned on, the tractor will deliver its trailers, complete a circuit



## **You can recommend it with complete confidence !!**

When you recommend the JACKSON TRACK MAINTAINER as the very best, most economical means of both putting up and maintaining track of finest, uniform quality under all conditions and in all ballasts, you can do so with complete confidence . . . for, your good judgment is confirmed by literally scores of America's leading track chiefs . . . men who know from actual experience, daily use of these machines on their own roads, that it is far superior to anything in its category. Let us give you the complete facts and tell you where you can see these machines in action. How about telephoning right now!

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... relatively inexpensive ... unrivalled for low-cost, uniformly fine tamping in all operations involving medium to high lifts or any lift equal to or greater than the largest ballast used.

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## Week at a Glance CONT.

### Current Statistics

Operating revenues, seven months	
1957	\$6,105,484,249
1956	6,043,558,324
Operating expenses, seven months	
1957	\$4,805,911,027
1956	4,691,148,995
Taxes, seven months	
1957	\$627,112,171
1956	628,802,047
Net railway operating income, seven months	
1957	\$518,790,232
1956	573,230,686
Net income estimated, seven months	
1957	\$395,000,000
1956	447,000,000
Average price 20 railroad stocks	
September 24, 1957	78.93
September 25, 1956	93.77
Carloadings revenue freight	
Thirty-seven weeks, 1957	25,672,011
Thirty-seven weeks, 1956	26,526,046
Average daily freight car surplus	
Wk. ended Sept. 21, 1957	21,436
Wk. ended Sept. 22, 1956	4,291
Average daily freight car shortage	
Wk. ended Sept. 21, 1957	1,217
Wk. ended Sept. 22, 1956	13,876
Freight cars on order	
September 1, 1957	79,258
September 1, 1956	122,870
Freight cars delivered	
Eight months, 1957	67,894
Eight months, 1956	43,897

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of a freight dock, or do most anything the electronic signals command—all without further human attention.

### More signaling for more economy .....p.29

Increased annual savings, representing large returns on investment, have resulted from recent installations of modern signaling, according to a report at the recent annual meeting of the AAR's Signal Section. Examples are a 24.7% return on a new automatically controlled classification yard; 58% return on relocation of CTC machines; 57.4% on changing three manual control interlockings to remote CTC control; and 22% on snow-melters at power switches in CTC.

### The Action Page—Unionization needs limitation.....p.50

Railroad managements—already burdened with obstacles in their efforts to adjust themselves to changed conditions—should resist the current increased attempts to unionize supervisory and staff positions. The industry simply cannot afford to entrust selection of employees in crucially important jobs to the inflexible operation of union rules.

### Short and Significant

#### Rates — discussion, yes; decision, no . . .

The Western Traffic Association executive committee met in Chicago September 19, conferred the next day with Eastern and Southern carrier representatives. The story: rates were one of a number of topics discussed; no decision on a further increase was announced; individual road studies are still in progress (Railway Age, Sept. 9, p. 7).

#### The 'Symes Plan' . . .

for government aid in equipment-buying would still be necessary if Cabinet Committee recommendations were enacted, PRR President James M. Symes believes. He told Railway Age recently that the two legislative proposals together would be necessary to solve the railroads' financial problems.

#### A sales incentive program . . .

to increase first-class passenger travel is being actively progressed by several western railroads. Final blueprints aren't complete, but some roads may put the plan in selected stations, while others go system-wide.

#### Riss threatened with suspension . . .

Citing literally hundreds of arrests of Riss & Co. truck drivers and numerous safety violations—on top of "a shocking total of 51 deaths and 501 injuries" resulting from Riss truck accidents from 1951 to 1953—the ICC last week ordered the Kansas City trucker to cease and desist from violations of commission safety rules. Failure to comply leaves Riss subject to suspension or revocation of its rights.

## ENGINEER'S FIELD REPORT

PRODUCT RPM DELO OIL RR

BAMBERGER RAILROAD CO.  
FIRM Salt Lake City, Utah

# 5 years without overhaul on RPM DELO Oil



Lubricated with RPM DELO Oil RR since going into service, three switch locomotives of Bamberger Railroad have worked over five years without a major overhaul. "The oil does such a good job of protecting engines that I've never had to repair or replace a part because of faulty lubrication," says

General Shop Foreman J. F. Buckley (below). "Every time we've opened the engines for inspection we've found them clean, free of carbon or lacquer deposits." Bamberger hauls general freight between lines of UP, WP, SP, and D&RGW over 36.9 miles of its own mainline track between Salt Lake City and Ogden.



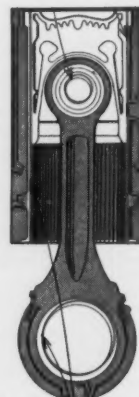
Clean piston (above) has no measurable wear, shows the kind of performance Bamberger gets with RPM DELO Oil RR. "We simply wipe off parts and they're bright and shining," says Mr. Buckley. Firm's EMD 800's (#601 top right, #602 above) deliver cars to sidings and make up trains for larger locomotive—work an average of 16 hours a day. Engine #570 (top left) makes the Salt Lake-Ogden run, works 10 to 12 hours daily.



STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20  
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey

## Why RPM DELO OIL RR reduces wear, corrosion

- Oil stays on engine parts—hot or cold, running or idle
- Anti-oxidant resists lacquer formation
- Detergent keeps parts clean
- Special compounds prevent corrosion of bearing metals
- Inhibitor resists foaming



For More Information about RPM DELO Oils or other petroleum products of any kind, or the name and address of your nearest distributor, write or call any of the companies listed below.

STANDARD OIL COMPANY OF TEXAS, El Paso  
THE CALIFORNIA COMPANY, Denver 1, Colorado

# What Makes a Good Salesman?

Ideal traffic solicitor, Allied Chemical & Dye traffic director tells N&W conference, knows his railroad, the extent to which it can serve customers, and is familiar with the potential customer's business.

The ideal freight traffic solicitor is one who thoroughly knows his railroad and the extent to which it can serve its customers.

In addition, W. J. Sullivan, Allied Chemical & Dye Corp. traffic director, told the Norfolk & Western's recent annual traffic department conference, the ideal freight traffic salesman is familiar with the operations of the firm whose business he is soliciting.

"He is sympathetic to rate and service problems and helps me to understand why cars are scarce only during car shortage," Mr. Sullivan continued. "He is not afraid to tell me when I can't have my own way. If my requests for service or reduced freight rates cannot be met, he does not hesitate to tell me the facts or present some explanation that enables me to accept half a loaf rather than none.

"He knows my name and usually finds compatible subjects to talk about. It is not always necessary to discuss the weather because I, too, have reasonable powers of observation. Out of deference to the capacity of my lungs he doesn't smoke more than six cigars. Monday morning and Friday afternoon are busy times, and when he regulates his visiting hours I regulate mine and can be always available. It is not necessary for me to make appointments because I am there to see him and to learn from him where the transportation interests of Allied Chemical may be improved."

The salesman, Mr. Sullivan said, "should assemble in orderly fashion the items he would like to discuss and give me a reasonable opportunity to examine, investigate and report to him. He may not receive all of the traffic he would like, but he will certainly receive an adequate explanation. This ideal freight solicitor has my confidence because I have his. He sells me the integrity of his railroad and himself and accepts equally that of mine and my principals. . . There is no need for this man to criticize the competition because if he has good railroading behind him and I have become acquainted with it through him, he doesn't have to."

The selling of transportation actually begins within the railroad, Mr. Sullivan emphasized. If the internal groups—such

as the freight rates and divisions section and the operating, claim, purchasing and legal departments—perfect their part, then the freight traffic department is in an excellent position to sell effectively.

The operating department sells not by words but by its actions in furnishing locomotives, rolling stock and the men necessary to haul the freight. Rates and division men can be effective salesmen by creating in the mind of the shipping public a reputation for fairness and reasonableness which automatically attracts tonnage. "If the sales department doesn't have an abnormal number of complaints on claims from the shipper, then there are salesmen in the claim department."

Ordinarily, Mr. Sullivan said, the buyer of transportation rarely meets the railroad lawyer, which "may be by design rather than by accident. The railroad legal department usually originates certain contracts or leases which the industrial traffic

manager usually receives and usually transmits to his own legal department. Lawyers may linger a bit longer than appears necessary, but in the end we continue to do business within the specified limitations and confinements. The railroad legal department may not consider itself as having any particular sales potential, but with minimum effort it can create substantial good will on the part of the shipper."

Other speakers at the N&W conference in Norfolk, Va., included R. H. Smith, president of the railroad; N. R. Lehmann, assistant vice-president in charge of traffic; Stuart T. Saunders, executive vice-president; and S. S. Hosp, general freight traffic manager.

"The good traffic man," Mr. Saunders told the conference, "must know his product. He must know his company. He must sell not only railroad transportation but a standard performance. He realizes that in the railroad business the final product is



SPEAKERS AT THE N&W annual traffic department conference included, left to right: Stuart T. Saunders, the railroad's executive vice-president; R. H. Smith,

president; N. R. Lehmann, assistant vice-president in charge of traffic; and W. C. Sawyer, foreign freight traffic manager and chairman of the conference.

delivery of the goods, and that what the shipper wants is arrival of the lading on time and in good condition. The traffic salesman thinks of a continuing relationship with the shipper. He knows there is no such thing as a one-time buyer. His objective should be the establishment of a continuing buyer and seller relationship. And in achieving that end, he always endeavors to sell his railroad, rather than himself, to the shipper. A good traffic officer is a creative salesman. He does not think merely in terms of selling old cus-

tomers but of creating new markets and getting new shippers. His aim is not just to meet the competition but to *be* the competition—to let his competitors try to keep up with him."

Speaking of competition, Mr. Saunders said, the fact that it is constantly changing is one reason why a traffic officer's job is so challenging and stimulating. When Congress authorized the St. Lawrence Seaway in 1954 it did so on the basis of construction costs estimated at less than \$300,000,000, and pledged that the Seaway would

be built and operated on a self-supporting basis. "It now appears that the joint international costs will be around \$900,000,000, and that additional hundreds of million dollars will have to be spent to deepen the harbors and connecting channels between the lakes . . . In view of these higher costs, many advocates of the Seaway have changed their tune. While in 1954 they were willing to have the Seaway placed on a self-supporting basis, they are now making a strong drive to avoid payment of adequate user charges. Some are seeking bargain or promotional tolls, while others are advocating no tolls at all . . . Congress, I am confident, would never have authorized construction of the Seaway unless it was to be operated on a self-liquidating basis. If that requirement is now nullified, or watered down, this will be a breach of faith with the American people. There can be no doubt as to the soundness or fairness of the user payment principle."

About 200 of the N&W's sales and service representatives attended the conference. A highlight of the two-day affair was a trip over the N&W and the Norfolk & Portsmouth Belt Line.

## Watching Washington *with Walter Taft*

- **MORE FREEDOM** for railroad's truck subsidiaries continues hard to come by. Texas & Pacific Motor Transport's efforts to have the ICC eliminate Alexandria, La., as a "key point" for its over-the-road operations has drawn the concerted fire of the American Trucking Associations which wants the commission to deny T&PMT's petition with or without a hearing.

- **CAR SERVICE OFFICERS** of the AAR say that although the expected seasonal step-up in the shipping tempo may produce serious car shortages then, car supply at the moment, despite heavy demands for specific box types, is thought to be adequate. Surpluses that have occurred are expected to be short-lived, with peak loading period coming up with the turn of the calendar.

- **AN ARTICULATE FOE** of railroad efforts to insure that the St. Lawrence Seaway pay for itself may be Senator Potter (Rep., Mich.). He says railroads are trying "to render the route useless by boosting tolls" whereas the AAR position, simply stated, is that reasonable tolls, perhaps those originally suggested by project proponents, are justified. The senator says "enemies of cheap water transportation" want to shift the Seaway Corporation into the Department of Commerce where "they hope to strangle it stillborn."

- **MORE OR LESS** competitive rate cutting on government traffic? That's a question still to be answered in line with the new requirement for Section 22 rates to be made public. Will carriers be more or less apt to trim their original bids—a penny here, a penny there—after they see what the low bid quotations actually are?

- **SHIPPER REACTION** to published rates may be to seek selective reductions on movements they claim to be the same as government traffic shipped with Section 22 concessions. However, the new rule should permit a clearer picture of how much these concessions add up to.

- **HOWEVER IT'S SLICED** the passenger revenue vs. cost picture comes out red. That's the recurring theme of testimony and cross examination at the passenger deficit hearing. Whether the ICC formula is used or some other approach, the cost curve goes one way and the revenue line heads off in the other.

- **DEFICIT HEARINGS** were adjourned to December 3 last week after the presentation of a study of avoidable passenger service costs prepared by the Aeronautical Research Foundation. Professor John Meyer of Harvard University made the presentation as a railroad witness. December sessions will cover train operation study and a review of rate structures to determine their effect on revenues—up or down.

## PRR May Lease New Locomotives

The Pennsylvania may obtain part or all of a proposed diesel locomotive order through a lease arrangement with the builder.

Bids will be opened Thursday afternoon, October 3, in Philadelphia on 200 locomotives—165 road switchers and 35 yard switchers. Bids have been asked on both a purchase-for-cash and 15-year lease basis.

The railroad's action comes in the wake of persistent reports that a leasing arrangement might enter the locomotive financing picture; and it follows a call for quotations by PRR earlier this year on a similar program.

In its current call, the Pennsylvania specified that leasing be set up on an initial term of 15 years, with option to the lessee to extend leases of any or all of the engines for 1-year terms, up to a 10-year maximum. Quotations were asked on annual or semiannual rental over the initial 15-year term and on a daily rental during any extension of the original leases.

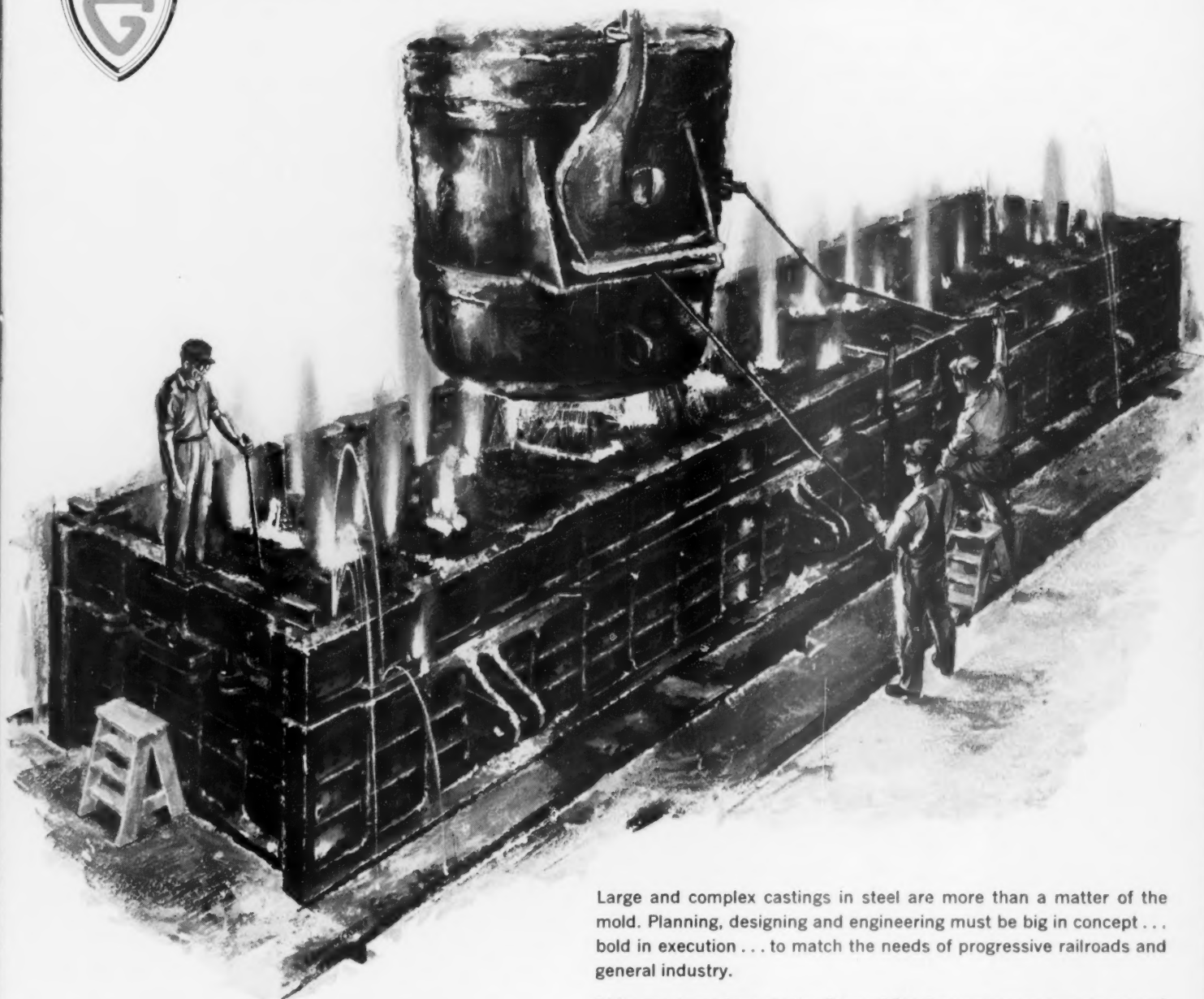
In addition, Pennsy sought a basis from bidders, as an adjustment of its rent, as to what the bidder will be willing to pay the railroad after return of the locomotives at the end of the lease, amounts which may be reserved by the bidder with regard to sale, lease, use or other disposition of the equipment.

Separate quotations were asked for each type of locomotive.

The Pennsylvania's call for bids contemplates acquisition of 85 4-motor road switchers, 50 6-motor road switchers, 30 B-unit 4-motor road switchers and 35 yard switchers. Road switchers will be of 1,600- to 1,800-hp; yard engines will be in the 1,000- to 1,200-hp range.



Where railroad progress is cast in steel.....



*Molten steel cascades from ladle into massive mold to form a Commonwealth one-piece freight car underframe.*

Large and complex castings in steel are more than a matter of the mold. Planning, designing and engineering must be big in concept . . . bold in execution . . . to match the needs of progressive railroads and general industry.

At its great, modern plants, General Steel never ceases to enlarge and improve upon the unique experience and skills it has to offer its customers. Commonwealth one-piece cast steel products have become the standard for railroads and other users throughout the world.

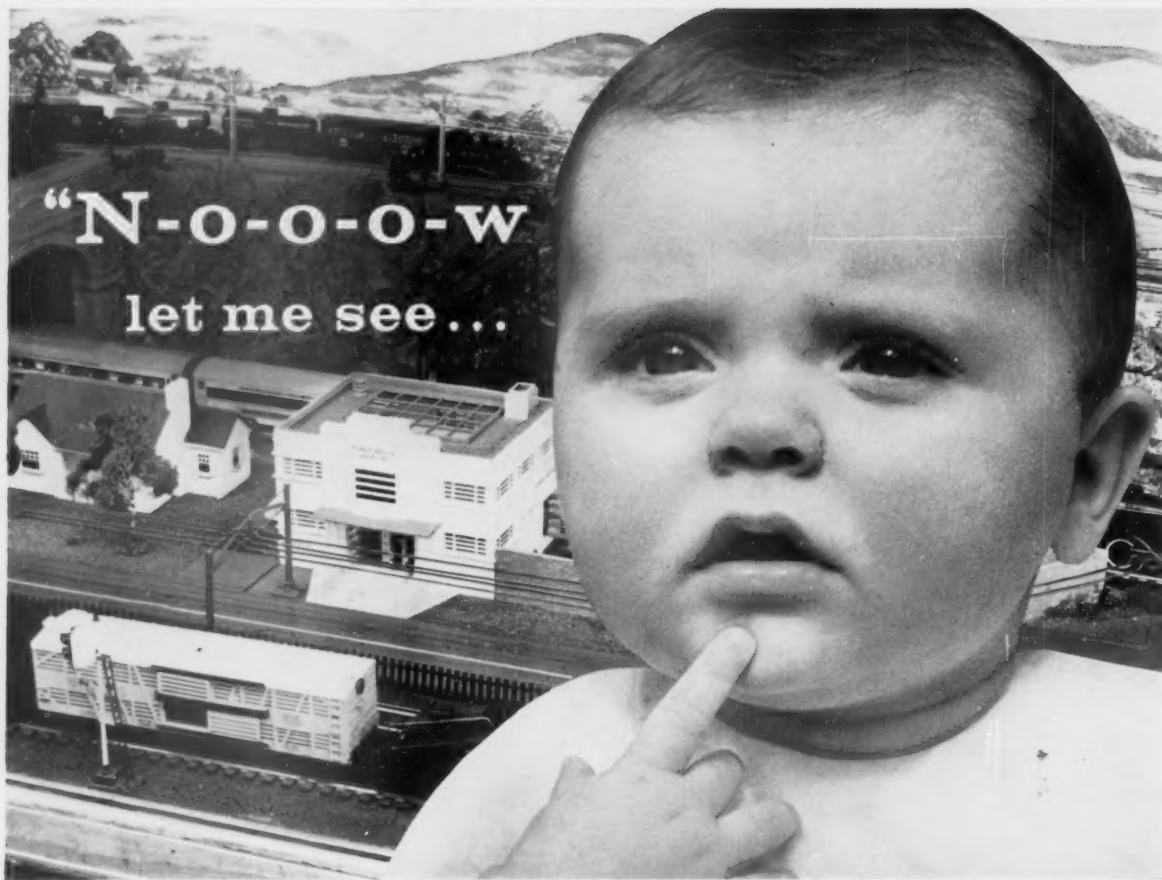
Build with Commonwealth products . . . on your road to lower maintenance costs.



*125-ton depressed center flat car. The Commonwealth one-piece underframe provides maximum strength with minimum weight, low platform height for easier loading of higher loads. Completely spring-borne Commonwealth 6-wheel equalized trucks, specially designed for high-capacity freight cars, assure safe, economical operation.*

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**"N-O-O-O-W  
let me see..."**

**...that comes to a saving of \$1050 per mile...  
per year...in tie renewals alone...just by  
installing Bird Self-Sealing Tie Pads."**

When you save \$1050 per mile of track, per year — it doesn't take long to get back your original investment in Bird Self-Sealing Tie Pads.

Suppose your ties last 20 years. That's about average under normal operating conditions. Your renewals would be approximately 5% — or 150 ties per mile per year. At a conservative cost of \$7.00 per tie (original cost plus installation) this amounts to \$1050 per year.

OK? Now, suppose your out-of-face installation includes Bird Self-Sealing Tie Pads. With a sound tie con-

dition, *renewals are eliminated for at least 15 years.* You save \$1050 per mile of track per year.

In less than four years, you've saved the entire cost of the Bird Self-Sealing Tie Pads. From then on, that saving represents pure profit, year after year!

Bird Self-Sealing Tie Pads are the only tie pads whose durable and effective seal with the tie has been proved through years of in-track service. Want complete information? Write to Bird Tie Pads, Department HRA, East Walpole, Massachusetts.

***Bird Self-Sealing Tie Pads Are Recommended For:***

Bridge Decks • Curves • Switch Timbers • Highway Grade Crossings and Other Paved Areas • Crossing Frogs • Insulated Joints • With Smaller Tie Plates • Pile Cutoffs • Through Station Platforms • Out-of-Face Installations in Rail-Laying Programs • Locations where tie life is short or replacement costs are high.

***Buy the Best...***



***Buy BIRD***



These ties were mechanically adzed to provide a smooth surface on sound wood. They start a new life cycle through the protection offered by Bird Self-Sealing Tie Pads. Moisture and abrasive materials cannot penetrate the seal.

# Where Are the New Freight Cars Coming From?

Of locomotive and operating problems discussed at the 1957 annual meeting of the four Coordinated Mechanical Associations in Chicago, foremost, once again, were hot boxes and car supply—not to mention economy fuel.

This year 1,700 railroad men and 1,700 supply men gathered to attend the technical sessions and to look over the exhibits of car and locomotive specialties shown by more than 130 member companies of the Allied Railway Supply Association.

J. P. Newell, vice-president of the Pennsylvania, said in a luncheon address that during "the past 20 years we have experienced a car shortage every time that railroad business has been good. The railroads have not had the funds to buy sufficient equipment to take care of peak demands, nor the earnings position to own such equipment and store it in good order when business was not booming. . . .

"Since about the depression years of the thirties," said Mr. Newell, "this country has witnessed a complete revolution in railroad motive power—far beyond anything ever experienced by any other industry in this country—both as to the extent of the change and the time required. . . . It is only natural that the increased expenditures for locomotives have adversely affected expenditures for other purposes, particularly equipment. While annual expenditures by Class I railroads for diesel locomotives were increasing 100 per cent in the 1947-1955 period . . . all other railroad capital expenditures were decreasing by almost 53 per cent. . . .

"It is a tribute to the railroad industry that it has been able to go as far as it has in modernization and new freight equipment since World War II in view of these restricted expenditures. It might be anticipated that they can devote that money to other capital improvements in the years to come. . . . To date both inflation and lack of adequate earnings have not permitted the expansion in capital improvement programs which are required to keep pace with modern transportation practices." Mr. Newell went on to say that the major problem is to find the money, and explained the so-called "Symes Plan" of the eastern railroads that would set up a government agency to purchase equipment for long term lease to the railroads with

the roads paying in full all costs, including interest, amortization and operating charges.

R. G. May, vice-president, operations and maintenance division, AAR, speaking at the Car Department Officers' Association said that the AAR spends a great deal of time with shipper organizations, such as the National Retail Lumbermen's Association which is actively pushing the "plug-door" box car and the bulkhead flat car. He reminded car officers that everyone is approaching the budget season and that the most important obligations of originating carriers are to provide enough cars and suitable cars. Despite the demands of shippers for special loading equipment and structural changes in cars, both of which are increasing, the two major concerns of railroads are adequate ownership and proper maintenance of the general service car fleet rather than of the specially equipped cars.

Stuart Schumate, vice-president and general manager of the RF&P, told the car officers that "there is still entirely too much departmental emphasis on most railroads. True, there have been major improvements in recent years, but it is important that we impress upon our subordinates that they work for the railroad and not for the mechanical department or some other separate department of the railroad. The end result is to produce the only thing we have to sell, and that is good, safe and dependable transportation service. . . . Improved communications too, can result in improved efficiency.

"I frequently hear car department officers say they won't give us time properly to inspect equipment. I am not sure who they is, but, whoever he is, there is no time to give. The competitive situation today, from the standpoint of time and service, does not permit more time; in fact, everything points toward reducing time now given to various mechanical operations. Let's face it then; what can we do about it? Let's consider five possibilities:

"First: Arrange forces in such way that more men are available on the arrival of trains at the yard to expedite inspection. One way to provide more men for inspection around-the-clock is to make car inspectors out of all of your shop forces

and, instead of working all shop forces on a one-trick basis, divide the existing forces for a three-trick operation. In this way the shop cars would be expedited and there would be more men available on the night tricks for inspection when necessary. It is absolutely necessary to repair cars around the clock.

"Second: More emphasis could be placed on repairing minor defects while the car is in the train rather than take the delay and the cost of the crew to shift the car out and place it in the shop.

"Third: Pit inspection of trains as they enter the yard. With the use of present day hot-box detectors and a well lighted pit, with an inspector on each side of the train entering the yard, I believe that the overall time required for inspection could be materially reduced.

"Fourth: The last service item is the oft-heard remark among car department officers 'I could shop nine out of ten cars in that train if I wanted to.' If this is the situation, it is time something was done about it. Your first reaction probably is 'If they gave me the money, I could fix it.' We have that mythical vagueness and here, again, our friend 'they' has no more money to use than he had time in the first situation mentioned. So the problem is back in your lap, and should be faced realistically. If we are expecting car inspectors to run certain cars, let's correct this situation, practice preventive maintenance, and place the responsibility where it belongs.

"I have often thought it would be advisable to have a car inspector foreman who had the necessary ability and authority to pass on each car that is shopped. You could then insist on uniformity of shopping and such things as permitting a load to go to destination if it were safe and make the necessary repairs after unloading. Other than for penalty defects and unsafe conditions, no loaded car should be shopped.

"Fifth: There is still too much lost motion in all departments. The labor costs of American railroads today are 47.9 per cent of gross; yet we say that a large per cent of the cars now being run should be shopped for attention. You should analyze the work of your shop in detail toward the end that labor now wasted on unnecessary moves can be utilized toward putting these cars in shape."



They directed the meetings . . .

ROY R. GUNDERSON, president, Bridge & Building Association, and engineer maintenance of way, Western Maryland.



J. E. GRIFFITH, president, Roadmasters' Association, asst. chief engineer maintenance of way and structures, Southern.

## CONVENTION REPORTS: ROADMASTERS AND B&B

# Lethargy—'Curse' of the RRs

Blunt terms were used by the Southern's D. W. Brosnan in an address on current railroad problems. In urging supervision to take a more positive role in overcoming these difficulties he was "getting close to home."

There wasn't a man in the audience who wasn't listening to every word. But a perceptible number of them were seen to squirm uncomfortably now and then, as a schoolboy might squirm when he is being reprimanded by his teacher for a lesson poorly prepared.

Perhaps it was because the speaker—youngish-looking D. W. Brosnan, vice-president-operations of the Southern—was "getting close to home" in some remarks he was making about attitudes in the railroad industry. He was speaking at a joint session of the annual conventions of the Roadmasters' and Maintenance of Way Association and the American Railway Bridge and Building Association at Chicago on September 23.

His subject was "Facing the Facts," although there doubtless were listeners who felt the title might have been "Facing Yourself."

"In our industry there is a great deal of lethargy at all levels," Mr. Brosnan was saying. "Far too many railroad officers, from presidents down and supervisors up, are content with the status quo. This attitude seems to say: 'Let's preserve things as they are; any change looks like work and will likely interfere with a complacent mind and way of life. If change is to come it can come after we are gone; we should finish our days in comfort.'"

### Change of Attitude Needed

"This attitude by a too large segment of supervisory and management people is one great curse of our industry. We have gotten by with it . . . but it is now running out of gas and our industry will fail unless such attitudes are promptly changed."

"Competition is the spur" that has brought the need for changes in old atti-

tudes, he said, to the end that the railroads will be able to offer better service at lower costs. Then he got down to specific terms:

"For low prices, or rates, higher productivity must be had from money expended for both labor and materials. It is the duty of supervisory personnel and management to do the needed straightforward thinking, to find methods and means of reducing costs and at the same time improving services. When supplied, the facilities must be properly used as planned—this is largely your duty and is in your hands.

"Many railroads are today using obsolete plants, plans, and organizations in this technologic age. It is axiomatic that those who stand still are left behind in any procession. To keep up, and especially to walk at the front, is a challenge worthy of the best in you men. There is



D. W. BROSNAN, vice-president operations, Southern—"In our industry there is a great deal of lethargy at all levels."

G. M. MAGEE, director engineering research, AAR—"A 'P' research on ties is aimed at reducing necking and splitting and wear from the tie plates." ▶



no room for lethargy, for contentment, for 'can't do' attitudes, or for passing the buck.

#### Must Take the Initiative

"All too often I have heard it said by people in supervisory places that top management won't provide the money or agree to changes. Be that as it may, I am convinced that most often supervisory people—you folks and your opposite numbers in Transportation and Maintenance of Equipment—fail to ask for—insist upon—and courageously explain your plans.

"Why is it needed and what will it produce? To have a good conscience about doing your part be certain that you move with vigor and imagination in studying and presenting plans—then when the im-

provement is made or the change effected, get behind it with all of your moral and physical stamina to make it work as planned."

Then came these suggestions for soul searching on the part of the audience: "Are you a do'er or a drone? Do you believe in a better present for your company, for yourself and your fellow officers and employees? Are you willing to stand up and press boldly for an ever larger participation in the future of this country? These things can be had. They will come to those men and companies who will prepare for them and then take them.

"Let us face this fact. What is being done is not nearly adequate. Energy, thought, courage and self-dedication are essential to success. You can afford to do no less."

## Grotz Wants Long-Range Planning

Forward thinking as a method of solving the railroads' problems was counseled by W. Arthur Grotz, president of the Western Maryland, in an address before another joint session of the two associations. While short-term planning is done in considerable detail, what is needed today is more long-range planning, he declared. Such planning "would provide the overall framework into which the short-term plan—the individual new yard or CTC, the financing and dividends, public relations and personnel development—should fit. A long-range plan would state the goals, the philosophy or creed, would set target dates for programmed actions, and would furnish measures for testing accomplishments."

Mr. Grotz believes that long-range planning involves getting answers to such questions as: "What does your management want your company to be in 1970, in terms of service, facilities, position in the whole transportation field, gross revenues, net earnings, balance sheet and organization? How can it get them? Can a road map be prepared? Certainly it should get there more surely with a plan, however imperfect, than without one."

He believes, further, that "every effort to think objectively and not wishfully about the company's future and to write down specific plans and dates will challenge and bring out the best in management."

Mr. Grotz also had something to say about the "management concept" of supervision. This means, he said, "that a man

## Officers Elected by the Associations

In the election of officers in the ROADMASTERS' ASSOCIATION, E. L. Anderson, assistant to the vice-president operations, Frisco, was advanced from 1st vice-president to president; C. E. Neal, division engineer of the Northwestern Pacific, was advanced from 2nd vice-president to 1st vice-president; and S. E. Tracy, superintendent of work equipment, CB&Q, was advanced from director to 2nd vice-president. R. G. Simmons, general roadmaster, CMSIP&P, was re-elected treasurer.

On the board of directors, E. F. Snyder, assistant to chief engineer, IC, was elected to a 1-year term and G. D. Mayor, division engineer, C&O, to a 2-year term. F. L. Etchison, chief engineer, WM, and W. C. McCormick, general roadmaster, SAL, elected to 4-year terms.

In the election of officers in the BRIDGE &

BUILDING ASSOCIATION, W. H. Huffman, assistant chief engineer, C&NW, was advanced from 1st vice-president to president; M. H. Dick, engineering editor, Railway Age, was advanced from 2nd to 1st vice-president; B. M. Stephens, assistant to the executive vice-president, T&NO, was advanced from 3rd to 2nd vice-president; and H. D. Currie, master carpenter, B&O, was advanced from 4th to 3rd vice-president. The position of 4th vice-president was abolished. L. C. Winkelhaus, architectural engineer (retired), C&NW, was re-elected treasurer.

On the board of directors, G. W. Benson, division engineer, CGa, was reappointed for a 1-year term and W. H. Bunge, assistant engineer, MP, and E. R. Schlaf, assistant superintendent of water service, IC, were each reappointed to serve 3-year terms.

is not a supervisor because he knows how to operate a particular machine better than anyone else, or is the best draftsman, or happens to have likable personal characteristics, but because he has a special ability or training to appraise people and their performance, to coach and lead them.

"As supervisor, he is not to do his men's work but to get them to do it, and to make sure that they do it effectively. He may have a production job of his own to perform, as does a playing manager on a ball team, but it is distinct from and in addition to supervision. He must see that performance is recognized and convey his interest in the individuals who have performed so well."

To the extent that Mr. Grotz and Mr. Brosnan were telling their audience what management expects of supervision, they were discussing a subject that was the theme of a report presented by a committee of the Bridge & Building Association. (A total of 15 committee reports on current problems were presented in separate sessions of the two associations.)



**FOR THE RECORD**—B. M. Stephens, assistant to the executive vice-president, Texas & New Orleans, registers along with J. M. Lowry, chief engineer of the Cotton Belt.



**QUESTION!**—E. F. Garland, bridge supervisor, New Orleans Public Belt, passes a proposed question to E. L. Anderson, assistant to the vice-president, operations, Frisco, who was moderator of a question-and-answer session.

## A Guide for Supervision

The report of this committee was, in effect, a guide for supervisors. Here, in summary, is the committee's conception of what management expects of the supervisor:

1. Top management should expect that its appointed supervision will be proud of and speak well of the company they represent and will carry out the directives of management with unquestioned honesty of purpose and devotion to duty.

2. It expects its supervisors will be able to do, and that they will, plan a realistic program and, following approval, will carry it out with the least possible interference in a workmanlike manner, expeditiously and efficiently and that the plans for doing the work will be made common knowledge—written where possible. This means that authority for doing the work will be assigned to individuals and that the individuals will be told how much authority they have to do the job.

3. Continuous review of plans and schedules for the completion of programmed work to see that progress is maintained and that the operations are done in accordance with the most efficient methods available, is expected by management.

4. Management expects that humane treatment will be afforded all individuals and the dignity of individuals be preserved.

5. It expects that, in planning the work, sales and service engineers will be contacted as necessary, also that tests of material and/or equipment that indicate economies of operation will be recommended when they are economically justified.

6. Management believes a supervisor must make things happen this way: that things must not be allowed to work; they must be made to work.



**A WINNER?**—J. E. Eisemann, district engineer, Santa Fe, looks on as W. H. Huffman, assistant chief engineer, Chicago & North Western, puts his ticket stub in the basket for the banquet prize drawing.

7. In cases where on-the-spot judgment is necessary, management should expect the supervisor to ask himself this question: "What would I do if it all belonged to me and I had to pay the bill?"

8. Management should expect that work simplification studies will be made, that the supervisor will pick a job to improve, that he will break down the job, that he will question every detail of a job, that he will use these types of questions: Why is it necessary? What is its purpose? Where should it be done? When should it be done? Who is best qualified to do it? What is the "best way" to do it?

9. A supervisor is expected to believe that safety is of the first importance in the discharge of duty and to believe that obedience to the rules is essential to prevent accidents. Investigation of all accidents to determine the cause and responsibility for the accident is expected.

10. Good housekeeping is always required. Protection of company property is expected. Management expects the use of company-owned tools, equipment and other assets will be policed and that the supervisor will see to it that they are fully protected against loss, damage, or misuse.

11. Management expects that a supervisor will secure material and equipment for prompt repairs to tracks and structures when train operations are interrupted by accidents or acts of God that make such drastic action necessary.

12. A supervisor should be expected to make periodic, impersonal, analytical, judicial evaluations of personal traits of character and technical qualifications of subordinates and to outline to subordinates in as formal a manner as possible the conditions that will exist when they are properly performing their assignment. A supervisor is expected to apply the Golden Rule in review and appraisal. (This can well mean you are not being tough enough.)

13. Management believes that the success of a supervisor is in direct ratio to the degree of planning he does—that it is through planning and programming that the number of emergencies he is involved in are reduced.

14. Management should expect the supervisor to possess the qualities of leadership and creativity. He is continually expected to improve his ability to get things done through people by improving his professional knowledge skills, habits and attitudes.

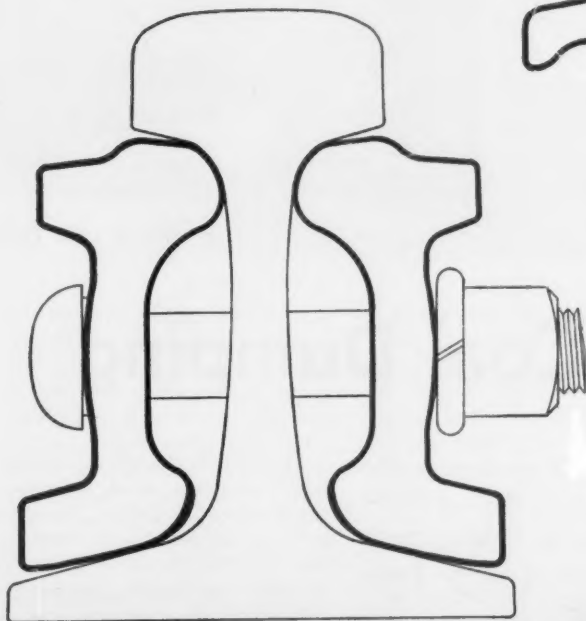
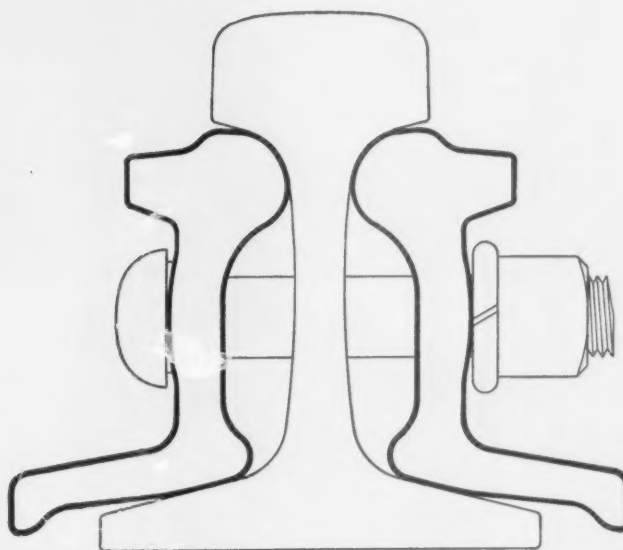
15. Management should expect that the supervisor will take time out to *think*, that he will do flexible thinking, thinking that will change with the times; and that he will *Work Smarter—Not Harder*.

# Sure-Fit

## A New Conception in Rail Joints

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SURE-FIT is a Rail Joint having the outer faces so constructed that the bolt assembly will bear *only* along the longitudinal center line of the bolt holes, regardless of the effects of wear or manufacturing tolerances on the rails or joint bars.



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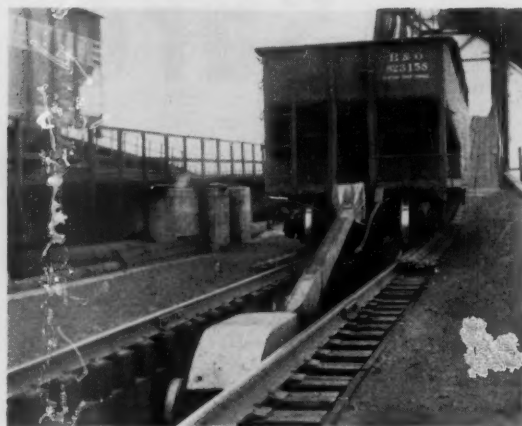
\*Particularly advantageous with the larger web-head radius fillets.



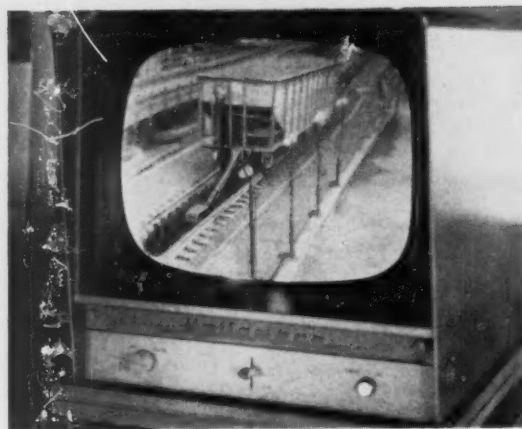
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◀ What the TV ...



... sees ...



... shows up here

## How TV Speeds Coal Dumping

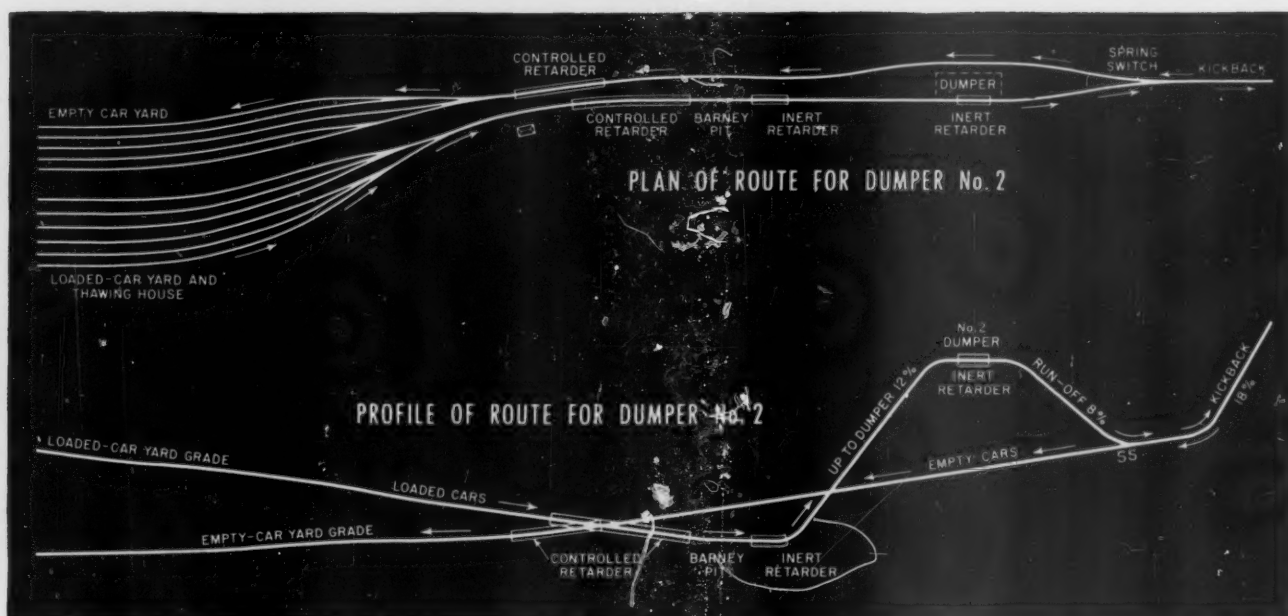
Coal dumper operators on the Central of New Jersey are watching TV these days as part of their work. One of their jobs is to control barney movements, and to do so they must know when the barney is in position behind a car to push it up the incline to the coal dumper.

As part of the modernization of the dumper at Jersey City, N.J., and associated facilities, a television camera was installed at each of the two barney pits, connected with receivers in the offices where the operators are stationed. Now they can see the barney come up behind a car and make contact with the coupler.

The head of the barney is painted yellow, thus making a contrast with the barney head and the car coupler. The barney pits are floodlighted at night.

The installation of car retarders and power switches, aided by closed-circuit television and talk-back loudspeakers, is speeding operations at the Jersey Central's Pier 18. Pier 18, on the Jersey City side of New York Harbor, handles a substantial volume of bituminous coal for utilities in the New York Harbor area, Long Island and New England. This pier is equipped with two car dumpers of the lift-and-turnover-type, and each dumper is served by a separate loaded-car yard. On the lead from each of these yards to the dumpers there is a thawing house for heating frozen coal cars in winter.

From the loaded-car yard, or from the thawing house, the cars are released singly, to go by gravity to the barney pit. The barney, controlled by an operator, pushes the car up the 12 per cent grade onto



EMPTY CAR returning from the dumper (left) goes through a retarder on its way to the empty-car yard. Loaded car rolls from thawing shed downgrade to the barney pit. Retarder in foreground slows car; it then rolls onto inert retarder at the pit. Barney pushes loaded car up onto dumper where the car is turned upside down. Next after being righted it is pushed onto the kick-back rolling down—then up—and then down toward the empty-car yard. Two dumpers are in operation, but plan is similar for both.

the dumper platform. As the car arrives it pushes out the car previously dumped, which goes down an 11 per cent grade, trails through a normally closed spring switch, then moves up an 18 per cent grade on a kick-back trestle. When the direction of the car is reversed on the kick-back, the facing-point spring switch routes the car to the lead extending to the empty-car yard.

### Car Riders Displaced

Prior to the modernization, car riders controlled the gravity movements of cars from the yard, through the thawing houses and to each dumper, as well as from the dumpers to the kick-back, and back to the empty-car yard. Switchmen handled the switches at the entering end of the empty-car yard.

Now the movement of cars is all mechanically controlled. Automatic spring switches are in service at the leaving end of the loaded-car yard and from the run-off of the kick-back.

In the case of the No. 2 dumper (see plan) a controlled car retarder is located between the thawing house and the barney pit. In this barney pit, each car runs into an inert retarder which is set, all the time, to bring every car to a stop at the proper location to be engaged by the barney.

Another inert retarder is installed on the platform of each dumper. As the barney delivers a car onto the dumper, this inert retarder brings the car to a stop at the proper location for dumping.

### Empty Cars Also Retarded

This modernization program has also included the installation of a controlled electropneumatic car retarder on the lead track from the kick-back to the empty-car yard. The kick-back tracks from both the No. 1 and the No. 2 dumpers are connected to this one lead with its retarder for routing all empty cars to the empty-car yard. Switches leading to the tracks in this empty-car yard are operated by

electropneumatic switch machines. Also, each track in this yard is equipped with an electropneumatic skate.

Controls of the power-operated electropneumatic car retarders, switch machines and skates are included in a panel-type machine in a new control tower. One operator in this tower watches the movement of cars, and controls the machine accordingly.

The operator has two-way, direct-calling loudspeaker communication with the thawing sheds, the cabins on the dumpers and the yard office.

This project of modernization was under the jurisdiction of J. J. Coakley, signal engineer of the Central of New Jersey. The retarders, power switch machines, skates and control equipment were furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company. The spring switches are Bethlehem Style 22. The loudspeakers and amplifier apparatus were furnished by the R. W. Neill Company, and the television equipment by Hallamore Electronics Company.



**MANNIX Sled** is unloaded beside track and is introduced beneath track by jacking up rails and ties and pushing sled under with a bulldozer.

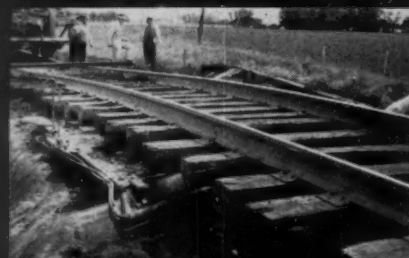
## New Cost-Saving Operation through use of HYDRAULIC CONTROLS

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# Tips on Investigations . . .

## NEW BOOK OFFERS HOW-TO IDEAS

Employee hearings and investigations sometimes have a bad connotation around a railroad. Exactly why this is true is hard to say; it shouldn't be the case at all. The universal intent of investigations is education—education and improved safety of operations through precise observance of rules.

The procedure for conducting investigations is not complex, but all too often the trainmaster or superintendent has lacked needed guidance to handle this quasi-legal process without mishap or ultimate reversal. Complicating the picture, too—and this does happen now and then—is that management itself may reverse a lower officer's ruling.

It is unfortunate that to date very little has been written to help the line officer handle the investigative process. Most roads shy away from detailed written instructions. Experience may be a great teacher but some basic guideposts have long been in order. Fortunately, some are now at hand.

### Based on Awards

I. L. Fardal, superintendent of the Soo Line at Gladstone, Mich., has just published a 92-page booklet\* under the title, "Method and Procedures for Handling Investigations (or Hearings) with Employees, and for Assessment of Discipline." Based upon a study of various awards by the National Railroad Adjustment Board—and drawing, obviously, from Mr. Fardal's own experience—this short volume should prove helpful to any officer charged with discipline cases. The book is a second edition, bringing up to date the contents of the first, which was published more than a year ago (Railway Age, Oct. 17, 1955, p. 56).

The conduct of investigations is always a ticklish business. The NRAB functions as a Court of Appeals, from which an employee can seek redress when a discipline case is not resolved to his satisfaction.

Once at NRAB, a case that hasn't been handled "properly" at the initial stage—that is, without care in developing the record and without full regard to all the technicalities—can be reversed in a hurry. A shadowy body of "law" has developed around board decisions, although, it is true, "precedent" may or

may not be followed in any given case.

There is really something of a "puzzlement" in this investigations picture. Operating and schedule rules have been written by practical railroad men, for practical interpretation. Operating officers naturally view them in that perspective. Yet even their interpretations vary. And when such rules are subjected to courtroom-like interpretation they sometimes look ambiguous, equivocal and uncertain. What, for example, does "fair and impartial" really mean? The NRAB, or the "referees" who handle cases if they become deadlocked at the board, have only the case record before them. The principals remain at home.

So it is not surprising that decisions sometimes are, to say the least, frustrating to the original investigating officer.

The Fardal book takes a look at this whole situation. It cites case histories from NRAB records—cases where investigations were improperly handled with the all-important explanation of why. It cites properly handled cases, too, and it is these distinctions, the right vs. the wrong, that ought to be a helpful guide to any investigating officer.

Mr. Fardal says, for example, that an officer conducting an investigation should not also testify. If he can serve usefully as a witness, he should limit his participation to his testimony.

### Stick to the Rules

The book also points out that in most cases of insubordination, or refusal to comply with instructions, NRAB awards tend to sustain the carrier. The board's apparent view is that an employee is not entitled to substitute his judgment for that of his superiors unless hazard to life or limb is involved. He should comply and, if contract violations are involved, seek redress in the proper form.

The carrier does not have a right to discipline an employee for sustaining a personal injury. It does have the right to discipline for violation of safety rules which caused the injury. The distinction is important.

As Mr. Fardal suggests, the preparation of charges must be precise on this point or the case may ultimately be reversed on the "technicality." The investigation officer must avoid such pitfalls or find his work has been in vain.

Rule G violations still constitute one of the biggest headaches, and the volume of

cases bulks large. They are, at the same time, among the most difficult to handle. The Fardal book is full of examples on this score. Contrary to some opinions, the carrier does stand a chance provided they are handled properly.

The written transcript of the investigation may not always say what it seems to, however, and there have been some unfortunate, even absurd, decisions rendered on appeal.

The big thing about these Rule G cases, or others for that matter, is that the entire hearing procedure not only be fair but appear fair. As Mr. Fardal points out elsewhere in his book, there should be no deviation from the principle that the employee is entitled to fairness and impartiality.

Surprise checks aimed at assuring full compliance with safety rules are still another area which can turn up headaches for the operating officer—and produce touchy spots with employees. Mr. Fardal counsels caution when such checks turn up violations.

Looking at NRAB's record in such cases, Mr. Fardal suggests that the safe course for an officer to follow is to hold an investigation, even a brief one, before assessing discipline. He would recommend such action even if the employee desires to take responsibility and waive his right to hearing. Should the employee have a change of heart later, and the case get carried to the board, the absence of a full record can easily result in an adverse award. Certainly, the board cannot intelligently determine the facts without a record before it.

### How to Avoid Appeals

When a case is "good" and the evidence of rule violations is clear-cut, labor organizations have been known to advise the employee frankly that an attempt to process the case higher would avail nothing.

But there have been other instances, too, where appeal is made—and the obvious means to obtaining a reversal lies in searching for loopholes, defects, bias, or prejudice in the record. It is to circumvent such moves, even discourage them, that the investigation officer is well-advised to know and understand the rights of all parties. If he builds his case soundly from that starting point, the chances of a miscarriage of justice will be correspondingly fewer.

\*Copies can be secured from the author, I. L. Fardal, 1414 Wisconsin ave., Gladstone, Mich., at \$2 each, with quantity discount.

# HOW EFFICIENT IS THIS OPERATION? HOW GOOD IS THE FINISHED PRODUCT?

Whether you are concerned with manufacturing or with purchasing rolling stock, these are questions of vital concern to you—for ultimately they govern the durability and cost of the end product. Here is just one example how HELIARC welding is helping railroads gain new product quality at substantial savings . . . the unit being fabricated is a galvanized iron and mild steel refrigerator car.

## Welding Speeds Average 30 In. Per Minute

Semi-automatic welding requires no special skill, and speeds two to three times faster than manual welding can be easily maintained. The HELIARC welded side and floor panels shown are fabricated of 14 and 20 gage galvanized iron and mild steel.

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In HELIARC welding, argon gas automatically shields the weld puddle from contaminating effects of the atmosphere. All 31 butt, lap, and flange joints in each car are of the highest quality.

Find out about the particular welding installation that can increase your production speed and unit quality. Call your local LINDE representative for detailed information on LINDE's modern methods for joining metals.



*Semi-automatic HELIARC welding torch speeds and simplifies fabrication of refrigerator cars.*

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DIVISION OF **UNION CARBIDE** CORPORATION

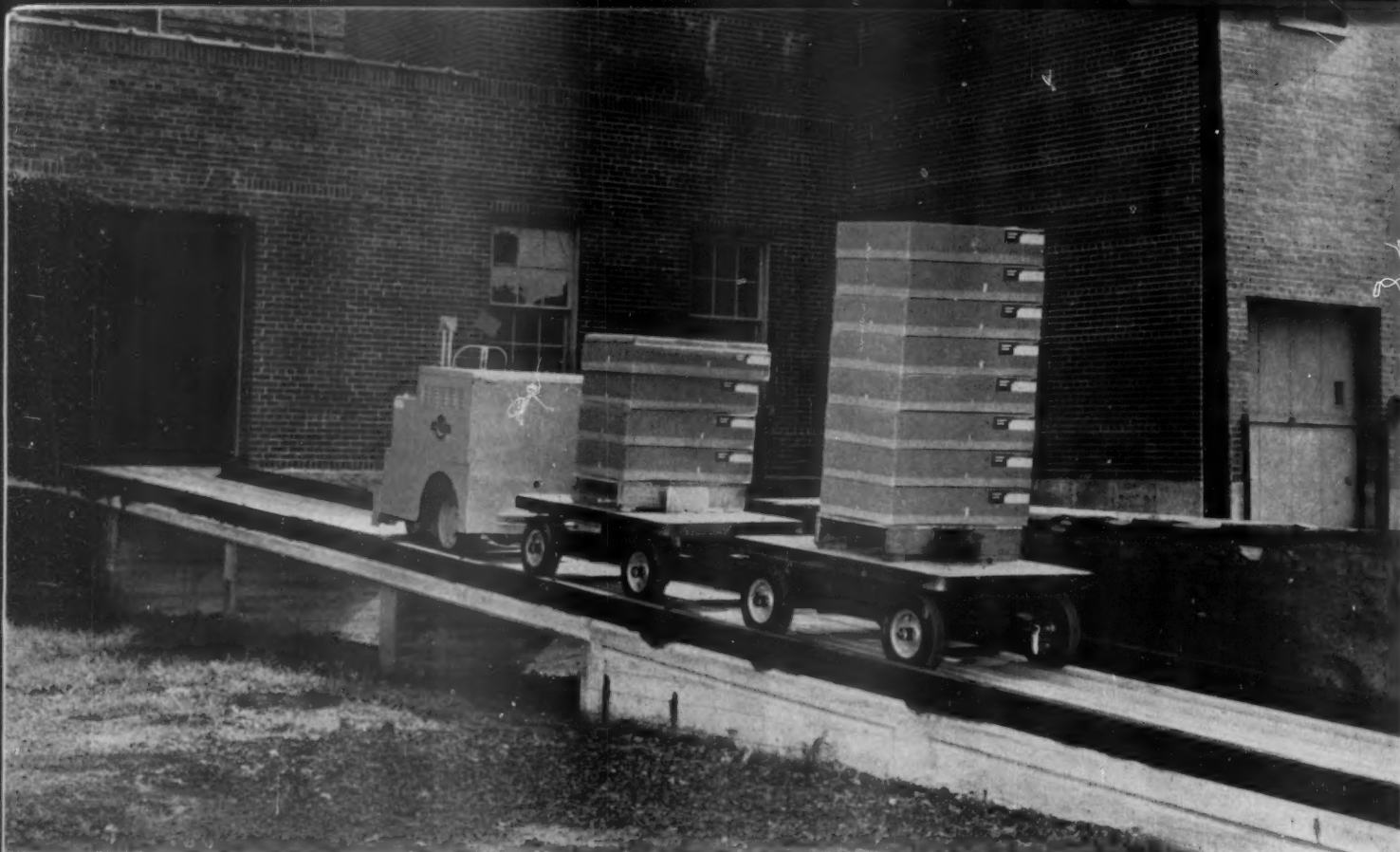
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forty years' service  
to the railroad industry.





## 'No-Hands' for Materials Handling

A tractor which goes about its business unattended by an operator is following an invisible electronic signal into the transportation field. Already in use in one truck-line freight house and under consideration as a baggage-handler for an airline, the "automated" tractor currently is attracting the interest of at least two railroads.

The tractor, called "Guide-O-Matic" by its developers, Barrett-Cravens Company of Northbrook, Ill., is essentially a standard electric model equipped to "track" on a high-frequency signal transmitted through a wire buried in the floor. It is powered by a 24-volt Exide battery. When positioned over the wire and turned on, the tractor will deliver its trailers to a destination, complete a circuit of a freight dock, or do almost anything electronic signals command—all without further direct human attention.

Up to now, installations have been largely in warehouse and armed-services supply depots. Two "Guide-O-Matic" loops, for instance, connect five warehouses at Kelly Air Force Base at San Antonio. Five tractors move from building to building, making stops automati-

cally at preselected locations. A "block system" which permits only one tractor in a building prevents jam-ups.

### "Sniffer" Box

A "sniffer" box on the tractor contains an electronic "brain" which picks up orders instantly, causing the tractor and train to follow the guide wire. Reportedly its retrace performance is accurate to plus or minus 1/2 in.

Transportation agencies are beginning to recognize that the unattended tractor which follows a predetermined route may bridge a hitherto unspanned gap between the "manual" tractor or lift truck and the dragline which tows freight trucks in a continuous string around the freight dock floor.

Mercury Motor Express, a southeastern motor carrier, has put the system in its freight house at East Columbia, S.C., and may install a bigger system at Jacksonville, Fla.

Barrett-Cravens thinks its "Guide-O-Matic" system has a place in the materials-handling field for these reasons:

In installation, the system is relatively

cheap. All that's required in fixed equipment is a small wire running through a saw-cut in the floor—or overhead. Signal-generating equipment consists simply of a high-frequency oscillator and amplifier.

Modifications of the "route" come easy; extensions or changes can be made without long delays to operations.

Tractors are instantly available at any location for manual operation.

Each tractor carries its own safety device, a cutoff which stops the motor if the tractor hits an obstacle.

"Guide-O-Matic's" designers point out that the device sometimes can assume the functions of a dragline, while under other conditions it works most effectively in conjunction with draglines. In one installation, in fact, a "Guide-O-Matic" loop crosses a dragline, with the movements interlocked so that collisions won't occur even if the dragline is loaded with trailers.

"How costly is 'Guide-O-Matic'?" Barrett-Cravens puts it this way: If the electronically controlled tractor can replace a man and a machine—and sometimes just the man—chances are its installation can be justified from a cost standpoint.



**contributes  
to  
railroad progress**

Guided by a sincere desire to meet and anticipate the ever-changing demands of progress, CF&I has, through the years, closely cooperated with the western railroads in the development of new and improved rails and track accessories.

Recently, CF&I has introduced three new rail sections, the 106, 119 and 136 lb. These new improved sections were developed with present-day needs and conditions in mind... track betterment... safety... economy.

These designs embody a combination of effective engineering features approved and accepted by prominent railroad engineers. Performance has proven the superior characteristics of these designs, justifying the recognition afforded them.

Past achievements of CF&I and the railroad industry have been a constant inspiration toward greater accomplishments, continuous development and dependable service.





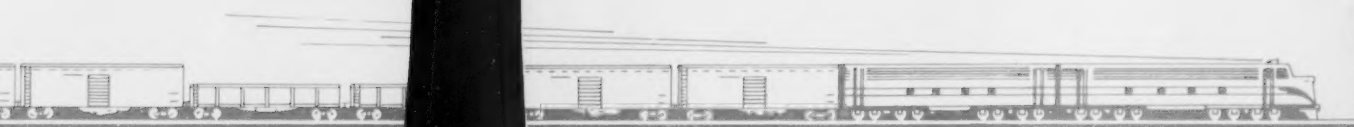
#### PROPERTIES OF SECTIONS

ITEM	SECTIONS		COMPARISON OF 100 RE TO CF&I 1060	
	100 RE	CF&I 1060		
AREA: HEAD	3.80 Sq. In.	4.00 Sq. In.	+	5.3%
WEB	2.25 Sq. In.	2.50 Sq. In.	+	11.1%
BASE	3.90 Sq. In.	3.95 Sq. In.	+	1.3%
TOTAL	9.95 Sq. In.	10.45 Sq. In.	+	5.0%
Weight per yard	101.5 lbs.	106.6 lbs.	+	5.0%
G.T./mile — single track	159.50	167.5	+	5.0%
N.T./mile — single track	178.64	187.6	+	5.0%
Moment of Inertia (I)	49.00	53.6	+	4.6" <sup>4</sup> + 9.4%
Section Modulus, Head	15.1	16.1	+	1.0" <sup>3</sup> + 6.6%
Section Modulus, Base	17.8	18.8	+	1.0" <sup>3</sup> + 5.6%
Ratio, "I" to Area	4.9	5.1	+	0.2 + 4.1%
Ratio, Section Modulus to Head Area	1.5	1.5	SAME	
Distance, Base to N.A.	2.75"	2.85"	+	0.10"

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

psi

106 CF&I	18,700	
100 RE	27,300	46%



Fishing and Base Dimensions of  
119 CF&I and 115 RE are identical.  
JOINTS FOR 119 ALSO FIT 115 RE.

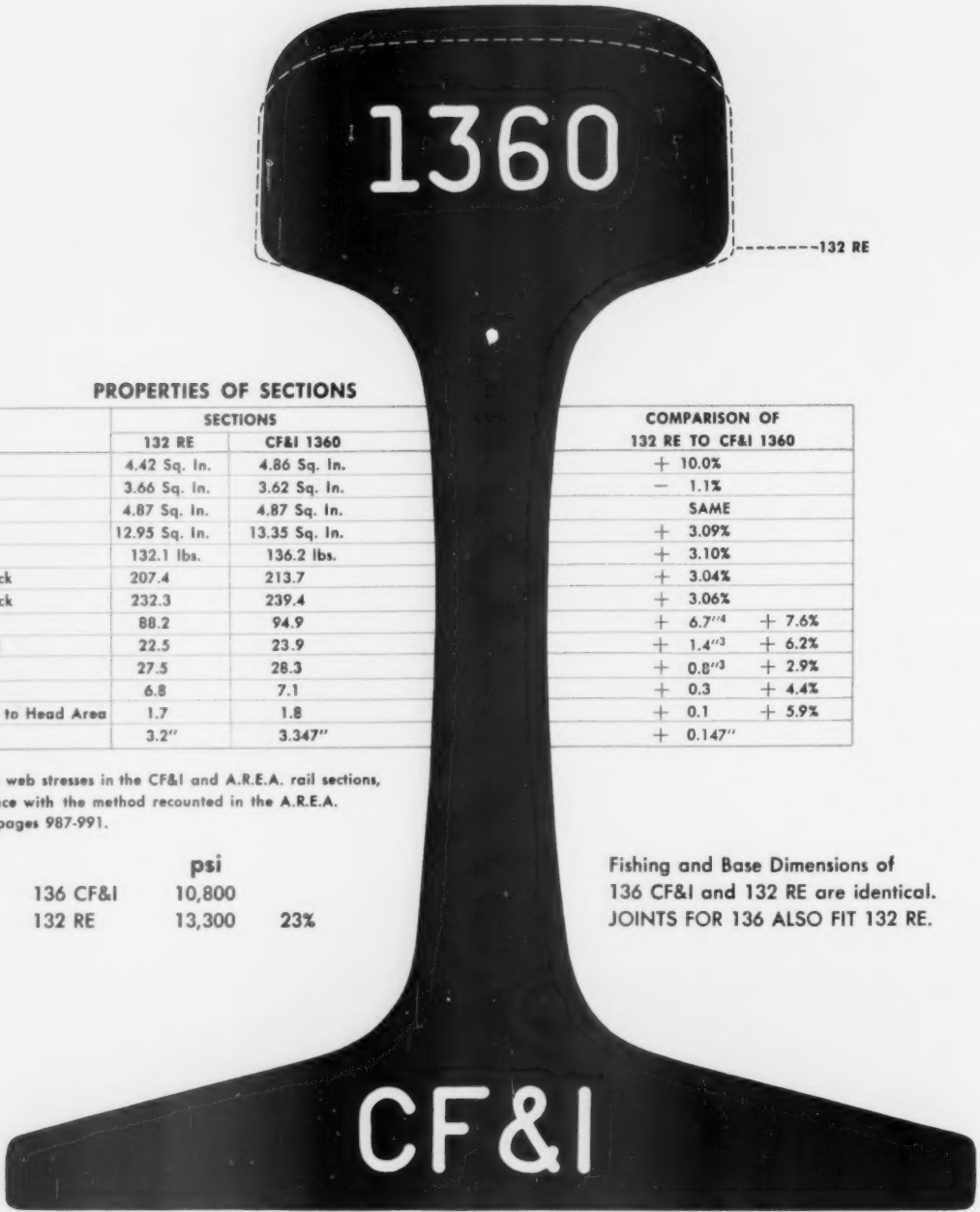


#### PROPERTIES OF SECTIONS

ITEM	SECTIONS		COMPARISON OF 115 RE TO CF&I 1190	
	115 RE	CF&I 1190		
AREA: HEAD	3.91 Sq. In.	4.32 Sq. In.	+ 10.5%	
WEB	3.05 Sq. In.	3.04 Sq. In.	- 0.3%	
BASE	4.29 Sq. In.	4.29 Sq. In.	SAME	
TOTAL	11.25 Sq. In.	11.65 Sq. In.	+ 3.6%	
Weight per yard	114.7 lbs.	118.8 lbs.	+ 3.6%	
G.T./mile — single track	180.7	187.0	+ 3.5%	
N.T./mile — single track	202.4	209.4	+ 3.5%	
Moment of Inertia (I)	65.6	71.4	+ 5.8 <sup>1/4</sup>	+ 8.8%
Section Modulus, Head	18.0	19.4	+ 1.4 <sup>1/3</sup>	+ 7.8%
Section Modulus, Base	22.0	22.9	+ 0.9 <sup>1/3</sup>	+ 4.1%
Ratio, "I" to Area	5.83	6.13	+ 0.3	+ 5.1%
Ratio, Section Modulus to Head Area	1.6	1.7	+ 0.1	+ 6.3%
Distance, Base to N.A.	2.98"	3.124"	+ 0.144"	

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

	psi	
119 CF&I	13,400	
115 RE	15,200	13%



1360

132 RE

#### PROPERTIES OF SECTIONS

ITEM	SECTIONS		COMPARISON OF 132 RE TO CF&I 1360
	132 RE	CF&I 1360	
AREA: HEAD	4.42 Sq. In.	4.86 Sq. In.	+ 10.0%
WEB	3.66 Sq. In.	3.62 Sq. In.	- 1.1%
BASE	4.87 Sq. In.	4.87 Sq. In.	SAME
TOTAL	12.95 Sq. In.	13.35 Sq. In.	+ 3.09%
Weight per yard	132.1 lbs.	136.2 lbs.	+ 3.10%
G.T./mile — single track	207.4	213.7	+ 3.04%
N.T./mile — single track	232.3	239.4	+ 3.06%
Moment of Inertia (I)	88.2	94.9	+ 6.7" <sup>4</sup> + 7.6%
Section Modulus, Head	22.5	23.9	+ 1.4" <sup>3</sup> + 6.2%
Section Modulus, Base	27.5	28.3	+ 0.8" <sup>3</sup> + 2.9%
Ratio, "I" to Area	6.8	7.1	+ 0.3 + 4.4%
Ratio, Section Modulus to Head Area	1.7	1.8	+ 0.1 + 5.9%
Distance, Base to N.A.	3.2"	3.347"	+ 0.147"

Comparative maximum web stresses in the CF&I and A.R.E.A. rail sections, calculated in accordance with the method recounted in the A.R.E.A. Proceedings, Vol. 48, pages 987-991.

	psi	
136 CF&I	10,800	
132 RE	13,300	23%

Fishing and Base Dimensions of  
136 CF&I and 132 RE are identical.  
JOINTS FOR 136 ALSO FIT 132 RE.

CF&I

COMPARISON OF THREE CF&I SECTIONS RELATIVE  
TO A. R. E. A. SECTIONS BASED ON ACTUAL SIZE.

THE COLORADO FUEL AND IRON CORPORATION

Denver, Colorado



# More Signaling for More Economy

Recent installations of modern signaling are effecting annual savings which represent large returns on the investment — for example: 24.7% on a new automatically controlled classification yard; 58% on relocation of CTC machines; 57.4% on changing three manual control interlockings to remote CTC control; and 22% on snow melters at power switches in CTC. These were among points brought out at the annual meeting of the AAR Signal Section in Chicago, Sept. 19, 20 and 21.

Significant savings resulting from new signaling projects were detailed in a report to the meeting by the section's Committee on Economics of Signaling. Outstanding examples included the following:

- At Houston, Tex., the Southern Pacific Lines in Texas and Louisiana converted a flat switching yard to a gravity yard with automatic retarders, automatic switching, motion weighing scales, modern communications facilities and floodlighting. Return on investment: 24.7 per cent.

An average of 25 road trains arrive at this yard daily, and 26 depart. In addition, 28 industry and interchange yard drags are received daily. The yard consists of 48 classification tracks, 23 receiving and departure tracks and 23 miscellaneous local, car cleaning and repair tracks with a total standing capacity of 6,620 cars. The construction and

operation of this yard were described in *Railway Age*, Jan. 30, 1956, p. 24.

- Installations of switch heaters on centralized traffic control on the Western Pacific yield a net saving of 22.1 per cent on capital investment, over and above 3.5 per cent interest. Previously snow was cleaned from switches by track forces. Now each power switch is equipped with a snow melter, which burns propane gas. Operation is controlled by the dispatcher as part of the CTC system.

- Three interlockings in California, owned jointly by two railroads, have been converted from local manual control to centralized traffic control, thereby effecting savings of 27.4 per cent on the capital investment.

- The control machine for 231 miles of CTC on Rock Island single track between Herington, Kan., and El Reno,

Okla., has been moved from Caldwell, Okla., a mid-point, to the dispatcher's office in El Reno. The annual savings on operating expenses equal 58.5 per cent of the total cost of the project.

## ICC Will Help Railroads

"The commission will not impede [signal engineers] or the industry in meeting . . . the constant pressure for the faster and more economical movement of heavier and heavier trains," according to Kenneth H. Tuggle, member of the Interstate Commerce Commission.

In an address at the meeting he said: "In all of its regulatory and administrative activities the commission intends to allow and, in fact, to encourage, the maximum play of managerial discretion (*Continued on page 32*)

## What management expects for its signaling money

A modern railroad today requires the "last word" in signaling, of a type that not only authorizes and governs movement of trains but also provides a lot of other information, both to the crews and to the dispatcher. This basic requirement was emphasized by H. C. Murphy, president of the Burlington, speaking at this Signal Section meeting.

"Every signal installation ever authorized on our railroad has paid its way," he said. "All of us would like to expand our signal systems but, because of the expense, we must limit ourselves to projects where the need is most critical and investment will produce the best results."

"Your efforts to reduce the cost of acquiring, installing, and maintaining signals, will permit more extensive use of centralized traffic control on double track as well as single track. Reverse signaling and remote control of crossovers, and authority to move trains by signal indication would have the effect of practically doubling the capacity of heavy density double track. In like manner, it would permit substituting single track for double track."

Mr. Murphy suggested that "A practical method might be devised for 'piping' in information from track-side television stations that would enable the dispatcher to look over a train every 20 to 25 miles if practical operation should

indicate that to be desirable. Also we should try to incorporate into the signal system an automatic hot box warning device.

"Other devices, some presently in more or less use, should continue to receive your attention in the hopes that they may be further improved and made more practicable, and at a cost we can afford to pay. In addition to the hot box detector I refer to dragging equipment detector, broken wheel or flange detector, etc.

"In the future as in the past, you will recognize, and do much to discharge, your responsibility to those who come after us. A country with a prospective population of 400 million in another fifty years makes it plainly evident the railroads will be called upon to transport at least three times as much freight then as now, and we must be prepared to do it safely, efficiently and economically.

"I firmly believe that if we work together as a team to exploit fully the inherent advantages of the railroads as mass transportation carriers our place in the industrial economy of the country is secure. There are so many ways in which we can expand service to meet the requirements of a growing economy without adding much to the physical plant that the railroads of the country should again see better times."

5

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(Continued from page 29)

consistent with the mandates of Congress and the public interest. This includes, of course, the commission's administration of the Signal Inspection Act, and I think you will agree," he said, "that the minimum signal requirements established in the past 20 years have not violated this basic policy.

"As to the state of carrier compliance with the Signal Act and the commission's rules and requirements thereunder, it is my impression that the industry as a whole has done a commendable job in bringing and keeping itself in proper line. I must observe, however, that a few carriers continue to be inclined to drag their feet, and our patience with them is wearing somewhat thin. Frequently much is hidden under the guise of economy. However, short-term economy is often long-range extravagance and near-sighted short cuts must not be tolerated in the field of safety and signaling.

"Several recent signal failures of a serious nature were caused by defective materials or parts that should have been replaced long ago. Yet they were a direct result of near-sighted management policy. As in all of such cases the delayed replacement of the part was the far more expensive course to take."

### Hot Box Detectors Pay Off

Electronic hot box detectors at Norge, Va., on the C&O were the subject of a short paper by T. L. Carlson, superintendent of signals. This project was explained in an article in the *Railway Age*, Mar. 25, p. 15; and a more detailed description of a similar installation on

A. L. Essman, chief signal engineer system of the Burlington, presided at this meeting of the Signal Section.

In his annual address, he discussed the responsibility for federal, state and other government agencies to pay their fair share of not only the installation costs but also maintenance expenses for highway-railroad grade crossing protection. He explained that the Regulations under the Federal Aid Road Act include a provision that "Such agreement, or order shall contain provisions covering construction, maintenance, and railroad contributions relating to the subject." One of the first states to recognize the fairness in relieving the railroads of the burden of maintenance of highway grade crossing protective devices was Virginia, where the code was amended to read, in part, "The state highway commissioner may agree with the railroad company as to the division of the cost of future maintenance."

the Reading appeared in the Apr. 1 issue, p. 47.

The detectors at Norge are on the westbound track, about 30 miles west of the terminal at Newport News. During July, eight hot boxes were detected. Another installation is to be made at the entrance to a yard.

Mr. Carlson said that "at the present state of development, there are technical reasons for having an operator to watch the charts and control the signals. Our goal should be detectors that operate and indicate automatically. In CTC territory the information can be transmitted to the dispatcher so that he can direct a train into a siding."

### Floor Discussion on Detectors

In discussion following Mr. Carlson's paper a representative of a manufacturer of these electronic hot box detectors explained that automatic control and indication equipment has been developed and is now being tested on a railroad. This new equipment will indicate for plain bearings only, omitting indications for locomotives and roller bearing cars, he said.

The indication can indirectly control wayside signals automatically to stop the train, and at the signal provide information to tell the train crew the exact car and journal that is hot. This automatic equipment will be on the market soon.

When installing a hot box detector one road chose a location used by westbound trains coming from two routes and going to two routes. If a hot box is detected, information is sent to a leverman at the next interlocking a few miles ahead to hold the train there for inspection. In 90 days this detector has detected 55 hot boxes.

Another road installed these hot box detectors where inbound trains enter a yard. Since April, they have found 104 boxes which indicated abnormally high temperatures, and were inspected by car inspectors at once. Results have been highly reliable, so that inspection in the yard has been reduced. As a test, every fourth train is not inspected in so far as journals are concerned.

In reply to a question: "Where should hot box detectors be located?" the answer was two fold: (1) At entrances to yards to short cut inspection of cars, and (2) on the line a sufficient distance from a yard for journals to become hot. Circumstances vary depending upon speeds. One road which has a detector at a yard, is placing another at a point 40 miles out. A representative of another road said that 10 to 20 mile spacing would be desirable on heavy traffic lines.

Numerous applications of electronics

in railway signaling were explained in an illustrated paper presented by Jerome O'Neill, supervisor traffic analysis of General Railway Signal Company. One example is the use of radar to measure car speeds and rollability in yards equipped with retarders. Another example is the use of carrier current, by which an extended mileage, up to 300 miles or more, can be controlled from one machine—either in that territory or at any other place on the railroad.

Other electronic equipment such as radio and microwave can likewise be used between CTC field locations and the control machine. Other advantages of using electronics in CTC are: high speed of transmission transmitting controls to field locations; and continuous scanning to indicate on the control machine the position of switches, aspects of signals and locations of trains.

Cab signaling and automatic train control have been vastly improved and simplified by introducing modern electronic devices.

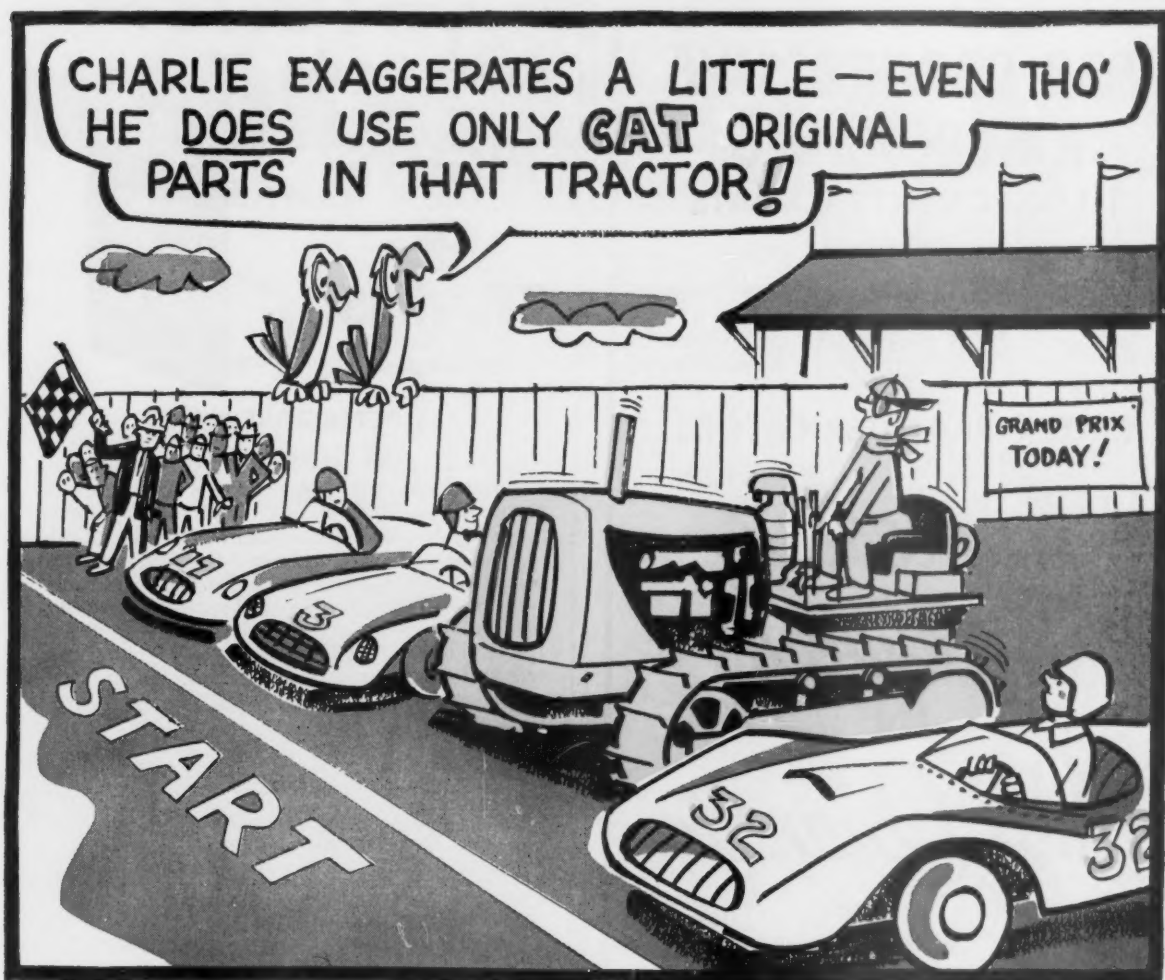
Also by using electronics, a new type of track circuit has been developed which requires no insulated rail joints in some applications such as controlling electric locks, and for some circuits in highway crossing protection. Other modern electronic devices, such as the transistor, have reduced power requirements and have improved reliability of performance.

### Retarder Yard Design

Methods of applying statistical analysis to ascertain the design requirements for automatic control of retarders in classification yards were explained in an illustrated paper presented by F. E. Lowance, vice-president, research and engineering of Union Switch & Signal Division of Westinghouse Air Brake Company.

Dr. Lowance demonstrated by graphs that controls should include accurate measurements of car rollability not only on tangent but also on curved track. This conclusion was deduced by applying purely mathematical techniques, using data secured by field tests. For example, charts showed that as accuracy of measurements of rollability increased, both for tangent and curved track, a greater percentage of the cars rolled to coupling at 4 mph or less, with a rapidly decreased number of cars stopping short.

This three-day meeting of the Signal Section included the reports of 11 other standing committees, several other addresses and technical papers, and panel discussions on three subjects, all of which are reported in the October *Railway Signaling & Communications*.



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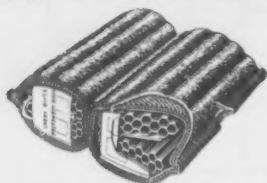
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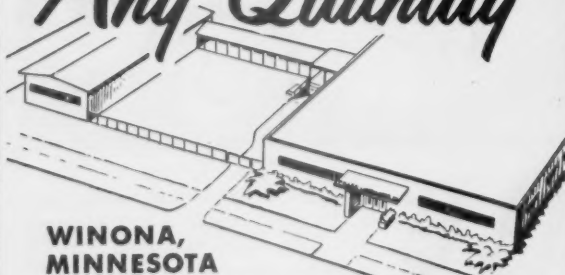
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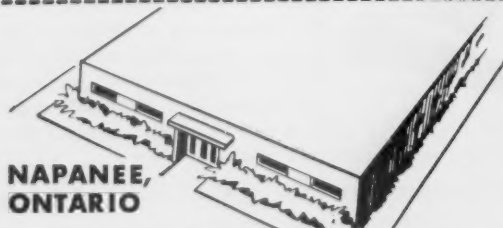


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5th edition



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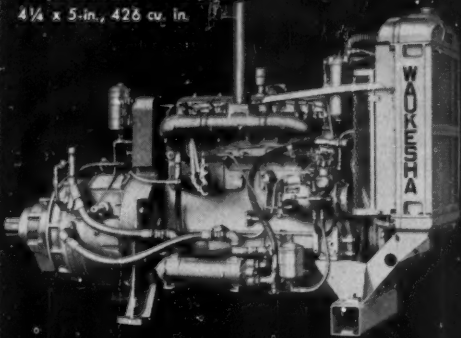
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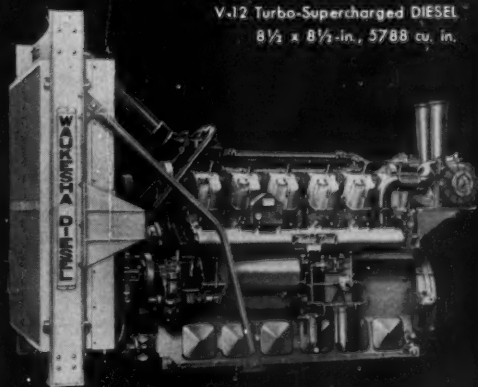
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# Current OPERATING DEPARTMENT Questions

## What to do about claims on forwarder traffic?

A paper on this subject presented at the recent meeting of the AAR Freight Station Section pointed out the enormity of the bill the carriers are paying for unlocated loss and damage in forwarder business, particularly that part categorized as unlocated loss of less than the entire package, and unlocated damage to freight in packages. This paper was presented by the Freight Agents' Association of New York.

I did a little checking and found that from 1950 to 1955, revenues from forwarded traffic increased slightly more than 37%, while all claim payments on forwarder traffic jumped almost 55%. At the same time, the contribution which forwarder traffic made to gross freight revenues decreased slightly. In 1955, unlocated loss of less than the entire package and unlocated damage to freight in packages were 35.5% of the total claim payments on forwarded traffic. In 1950, the figure was just under 35%.

The New York agents do not lay all the blame on the doorstep of the forwarder. Indeed, they say, "We, the carriers, are

equally at fault. Apparently we are accepting these losses as something we cannot control or avoid."

The paper then goes to say:

"We are handling shipments of value in containers which offer little protection, being second-hand and improperly closed or secured. We are accepting cartons of furniture and various appliances in cartons which evidently have been crushed or otherwise badly handled. This business is being delivered to us by over-the-road truckers, who for the most part are only hauling for some contract drayman or pick-up drayman under forwarder contract. Sometimes this freight is hauled hundreds of miles and has had one or more truck transfers before being delivered to the freight station or forwarder platform. This same operation is repeated at destinations where it is removed from cars or freight platforms and taken to truckers' distributing point for redelivery.

"Our first job, therefore, is to return to Rule 5 of the Consolidated Freight Classification, and turn back anything that is not in shipping condition. If freight is

accepted it must be examined first, and contents recorded on passing record and notation to that effect placed on forwarding records. Too many times such cartons have some sealing tape applied and away they go without first being examined to determine whether or not a shortage or damage exists. . . .

"We are receiving valuable merchandise in containers which invite pilfering or damage. We must do more than patch up—or complain about the condition of—containers, which under existing rules we are obliged to accept. It is suggested [also] that a periodic spot check of such re-used containers be made, particularly on returned merchandise. In most instances, no invoice will accompany the freight bill. However, when a claim is presented for alleged loss an imposing invoice will be produced."

Rule 5 of the Classification, Section 1, Paragraph (a), provides that "Articles tendered for transportation will be refused for shipment unless in such condition and so prepared . . . to render transportation thereof reasonably safe and practicable."

## Looking for management training "self-help"?

Upon reading the article (Railway Age, Sept. 9, p. 24) on the Canadian National's training program for middle management personnel, I was reminded of a book I came across recently. That part of the article which reminded me of the book was the presentation of a typical "case" studied by the CNR's middle management group. The book is "Case Problems in Transportation Management," by George P. Baker and Gayton E. Germane, published by McGraw-Hill (Price, \$8.50). Messrs Baker and Germane are transportation professors at, respectively, Harvard and Stanford.

This book is one of the Harvard Business School case books, and is given over to problems faced by all types of carriers—water, rail, air and highway. The cases discussed run the gamut from labor relations through pricing, merchandising, finance, organization, et al. About 14 of the cases involve railroads, including the B&M, NYC, C&O, and UP among others.

One good thing about this book is that the cases are all relatively fresh, i.e., they involve decisions which had to be made

since World War II. Many of them date from the 1950's.

I mention this book for two reasons. First, I understand from one of my colleagues that at least one railroad is thinking of using the book in its management training program. More importantly, it occurred to me that a lot of men interested in moving up in the railroad field might be interested in helping themselves. The Baker-Germane book certainly can help broaden a man's horizons.

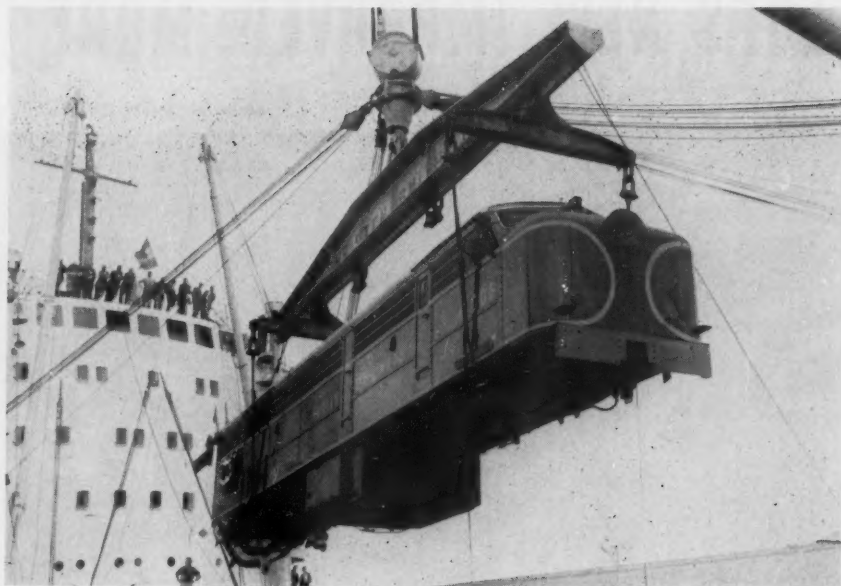
You'll be disappointed if you expect to find in the book the solutions employed by the carriers in these cases. You're expected to work out your own answers and document them as best you can with the facts given you, and your interpretation of the facts. For example, you're asked to decide, as the management of the Boston & Maine had to, between expenditures for crossing protection and CTC. You, like the management of the C&O, must determine how the purchase of some new equipment is to be financed.

Moving over into the field of the highway operator, you'll decide among several

possible courses of action for Roadway Express in the purchase of operating rights of other motor carriers. You can help United Airlines schedule a flight or the New Haven a passenger train. The Powhatan Valley Railroad has a rate request you can struggle with, and the Bangor & Aroostook has to decide on the form which a traffic reporting system should take. The variety of cases is good.

—G.C.R.

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.



### First of 100 Diesels Take Off for India

Largest single shipment of diesel-electric locomotives ever to leave the port of New York took place last week. Twenty Alco Products "World" diesels, first of an order

for 100 of the 1,800-hp units, were loaded aboard ship for delivery to the Railway Board of India. The units will also be the first broad-gage main line diesels in India.

### NYC 'Xplorer' Gets Chicago-Elkhart Run

New York Central's "Train X"-type "Xplorer" will be placed in local service between Chicago and Elkhart, Ind., October 27. Since going into revenue service in June 1956 the low-slung "super-light-weight" has made a daily 500-mile round trip between Cleveland and Cincinnati.

The "Xplorer" will find a counterpart also using Chicago's LaSalle Street Station. Rock Island's "Jet Rocket," an ACF "Talgo" lightweight, currently is being converted to a commuter train for Chicago-Joliet and Chicago-Blue Island runs. It's expected to go back in service late in October.

The "Xplorer's" shift comes as part of a revision of the New York Central's passenger service which goes beyond the usual seasonal changes. Passenger circles have buzzed for weeks with rumors that a wholesale reduction in passenger service is in prospect.

Present plans are to start Buffalo train No. 208, the "Great Lakes," at Toledo instead of Chicago; to eliminate trains 305 and 306 between Detroit and Toledo; to  
(Continued on page 40)

## Railroading



## After Hours with *John Lyne*

**EASY HANDLING, WHOSE CREDIT?**—Treasurer Harold Latham of the Northern Pacific wants to know to whom the credit should go when a train is handled without jerks and jolts. Is it the engineer who should be congratulated, or the locomotive manufacturer who built automatic transition into the power?

I have consulted some of my colleagues who know a lot more about these things than I do. They tell me that much of the improved performance is undoubtedly ascribable to the manufacturers, for the automatic transition in recent locomotives—and also for the better brakes and cushioned draft gear on the most modern passenger cars. But they also tell me that a careless engineer can handle the best-equipped train roughly—while a really competent one can avoid most of the jolts, even with old equipment.

**RAILROAD NICKNAMES**—As I reported before, most railroad nicknames seem to be defamatory—even though not so intended. Good friends can use some pretty harsh words to each other, when face to face, that wouldn't look right in print. Alco Survey Engineer David Strom at Schenectady has turned up one railroad nickname that is good natured, even when seen in type—it is "Hoot, Toot & Whistle" for the Hoosac Tunnel & Wilmington. But I've got a list now of some other railroad nicknames, among which there are a few that would make fighting talk for anybody connected with those roads. Didn't anybody ever try to make up a nickname that would be a compliment instead of a detraction?

**ENTHUSIASTIC BRAZILIAN**—There was a Brazilian railroader, Renato Feio by name, who was much in evidence at the recent Pan American Railway Congress in Buenos Aires. He is also well acquainted in the

U.S., where his road has obtained a lot of equipment. Mr. Feio heads the Santos-Jundiai Railway, and is an ardent advocate of further railroad development, in his own country as well as elsewhere. He goes around with a sheaf of charts to show his own railroad's performance, and to prove the points he makes about his country's need for much additional railroad construction.

I think fellows like this, with informed enthusiasm for the future of railroading, are an asset to the industry, in whatever country you find them. We have a lot of railroaders with this heartening outlook in the U.S. and Canada; and we couldn't possibly have too many of them.

**PUBLICIZING LOCAL HISTORY**—Maintenance Engineer H. B. Bussing of the

New Haven tells me that the "Great Swamp Fight—1675" sign alongside the NH main line in Rhode Island was put there by the railroad B. & B. department, which recently repainted it. I congratulate the NH on this evidence of its interest in local history, but I still think the responsibility for promoting such history with travelers falls primarily on the communities; and maybe railroad people could stimulate them in this direction—that is, to give railroad passengers the kind of historical information on signs that many localities provide for travelers by automobile.

I recently used the phrase "up in Maine" here, and Locomotive Maintenance Superintendent P. C. Dunn of the B&M points out that Maine isn't considered "up" in New England—it is always "down." I knew this, of course, but I wasn't sufficiently attentive. People usually say up for north, because, when maps are hung vertically, that's where north is. How they ever got their reverse usage "down east," I've never been told—but that's the way it is.

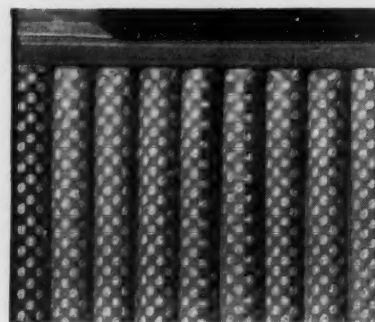
# EXIDE DEVELOPS NEW, IMPROVED, MORE

*Photo courtesy Reading Railroad*



**New MGD Exide-Ironclad Battery** for diesel locomotives. Designed to conform with recommended practices of Association of American Railroads.

## ADVANCED TUBULAR CONSTRUCTION— DEVELOPED OUT OF RESEARCH STARTED 15 YEARS AGO



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# ECONOMICAL DIESEL LOCOMOTIVE BATTERY

**New MGD Exide-Ironclad Battery design unlocks more power from battery space—gives you increased savings on investment and operations**

Now Exide-Ironclad diesel locomotive batteries are thriftier than they ever were. Always famous for long life and high performance, now they offer improvements that mean even higher capacity per dollar.

Exide has achieved these new benefits for diesel locomotive users by taking full advantage of the extremely high permeability of the armored porous tubing and its improved active material retention characteristics. This highly permeable tubing, made of braided glass fibers within a perforated polyvinyl chloride armor, acts like a highly efficient filter, preventing practically any loss or shedding of active material. Yet the high porosity enhances contact between electrolyte and active material—significantly improving battery performance.

## How you benefit

The new MGD battery packs more power per plate than other diesel locomotive batteries. It gives you a 50% increase in amperes discharged at diesel engine cranking rates even over previous model Exide-Ironclad Batteries.

The MGD is available in two sizes: 280 and 420 ampere-hours at the 8-hour discharge rate. In both, concentration of battery power reduces the space required. The MGD-19 (420 ah capacity) battery normally used in large road locomotives is now available within the dimensions of batteries furnished in smaller switching locomotives without sacrifice in cranking,

standby performance and life. This means new versatility and the possibility of reducing the number of sizes of batteries needed.

## Same Exide-Ironclad quality features

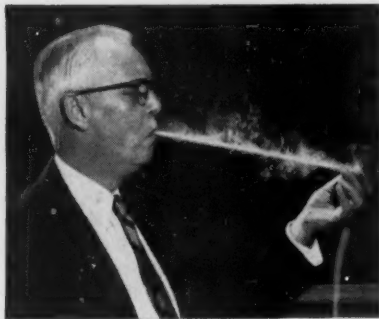
With all these improvements and new battery economies, you still get the quality features that contribute so much to the proven performance of Exide-Ironclad Batteries: heavy copper inserts in terminal posts and cell connectors to insure high sustained voltage during cranking; large electrolyte reservoir above plates to reduce watering requirements; ample sediment space in bottom of jar for long life; rugged molded rubber container built to withstand locomotive operation and provide for reduced maintenance.

## Discover how much you can save

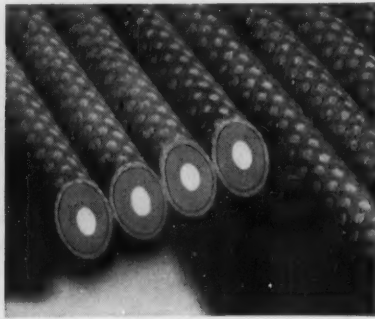
Learn how much you can benefit from the advantages this battery offers. Call your nearby Exide representative. Or write for complete information. Dept. MG, Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

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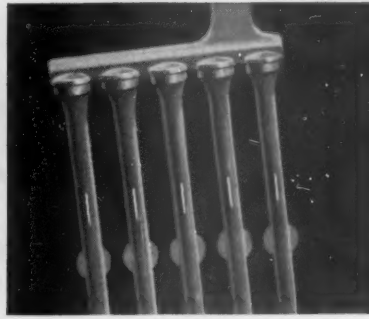
THE ELECTRIC STORAGE BATTERY COMPANY



**Greater porosity.** Highly permeable tubes ease current flow, reduce internal resistance, improve access of electrolyte for superior performance under heavy loads. Each plate tube delivers more power. Tubes hold . . .



**More active material.** Chief source of battery power. Larger inside diameter of tubes means every positive plate contains more active material per cubic inch of plate. You get all this . . .



**Plus Silvium,\*** Exide's patented grid alloy—proved more corrosion resistant than any other grid alloy. Tests prove conclusively that Silvium prolongs battery life.

\*U.S. Patent



### Photograph Sets New Precedent at ICC Hearing

First photograph taken during actual course of official hearing at Interstate Commerce Commission shows presentation of evidence in the commission investigation of railroad passenger deficit. Seated left just below bench, is J. L. Heywood, chief cost analyst, Pennsylvania, who submitted a study of the costs of passenger

service. On bench, left to right, are A. F. Boyd, chairman, Florida RR-PUC; E. W. Lund, chairman Minnesota RR Commission; Howard Hosmer, presiding ICC hearing examiner; R. A. Berrien, ICC attorney-advisor; and H. K. Davidson, chairman, New Hampshire PUC. State commission members were observers.

(Continued from page 37)

dispense with reserved seats on train No. 2, the eastbound "Pacemaker"; and to drop altogether the westbound "Pacemaker," No. 1, between New York and Chicago.

The Pullman-Standard-built "Xplorer" was taken out of service several weeks ago and sent to Beech Grove shops at Indianapolis for "extensive design, structural and wear studies." The Central has experienced some difficulty with the train's revolutionary diesel-hydraulic locomotive.

In its new service, the "Xplorer" will replace conventional equipment on trains leaving Elkhart at 5:50 a.m. and Chicago at 5:35 p.m. daily except Sunday. Its lounge car will be converted to coach space, yielding a total seating capacity of 392. The "Mealpak" dining service used on the Cleveland-Cincinnati run will be dropped.

### High Court Docket Vital to Railroads

The coming session of the Supreme Court which opens October 7 may settle several legal issues of particular interest to the railroads. Study of the high court docket reveals a variety of cases ranging from the Chicago terminals taxi contract to "agricultural exemptions".

Perhaps the most importantly regarded case, however, is that dealing with the Rock Island's truck operating rights.

This is the case in which the commission ruled in effect that, circumstances permitting, it could grant operating rights in more than supplementary service to a railroad's truck subsidiary. The circumstances involved in the case were that public convenience could best be served by the Rock Island's trucking arm in the area between

Chicago, Silvis, Ill., and Omaha, Neb.

The American Trucking Associations is the appellant from a lower court ruling that upheld the commission.

Intervening in the case as a "friend of the court," the National Industrial Traffic League, last week supported the commission. In a brief the NIT League filed, its attorneys stated "It is the position of the League that the commission is not required by law to limit the motor service to be rendered by a railroad affiliate to that which is auxiliary or supplementary of the rail service; and that the commission has the power to authorize motor service by a railroad affiliate without such limitation when it finds that such authorization is required by the present and future public convenience and necessity."

Previous high court rulings in "agricultural exemption" matters leave railroads little hope for favorable decisions in two cases under that general heading. One involves shipments of peat moss, the other, powdered milk and eggs and quick-frozen fruits and vegetables.

The railroads and the commission have sought to limit the lists of exempt commodities to products which have substantially retained their initial identity but the court has permitted the extension of the exemptions to products which have been processed or frozen.

The "taxicab" case docketed is an outgrowth of a switch from one hacking firm to another by the railroads at Chicago for transfer of passengers and baggage between the Chicago terminals. This case is aside from the \$19 million damage suit filed against the railroads and others by the Parmelee Transportation Company—the cab operator that lost the railroad contract.

Before the Supreme Court is the issue of whether the winner of the contract, Keeshin Railroad Transfer, is eligible for the work under terms of a Chicago city ordinance.

Other cases docketed for the Supreme Court include: a case involving the constitutionality of a California statute limiting Section 22 concessions for government traffic; a case concerning the right of the ICC to vacate a suspension of a railroad's proposed tariff prior to a final decision by the commission as to the lawfulness of the rates concerned; a case involving more or less peremptory government action to regain transportation overpayments; a case involving the right of the ICC to adjudicate intrastate fares.

Also, a case in which the question is raised whether a motor carrier which has filed for operating authority must first prove that railroad service currently provided is inadequate.

Just filed for Supreme Court review was an appeal from the U.S. District Court at Nashville upholding the ICC's finding that public interest warrants the merger of the Louisville & Nashville and the Nashville, Chattanooga & St. Louis. A petition for certiorari was filed in the case August 12.

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## IT'S ALUMINUM



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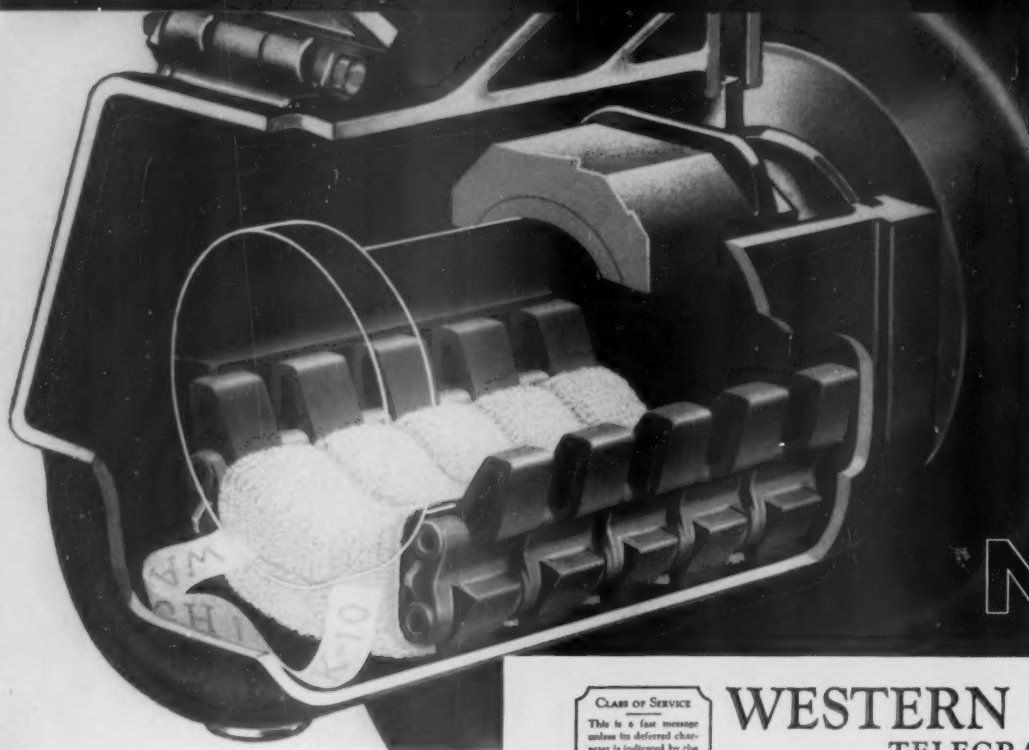
For equal strength, aluminum weighs only one-third as much as steel; for equal stiffness, half as much. This light weight made the Train X concept possible. For example, it permitted the single-axle design (without excessively short cars) which enables Train X to snake around curves at high speeds.

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# MARKET OUTLOOK *at a glance*

## Loadings Drop 2.2% Below Previous Week's

Loadings of revenue freight in the week ended September 21 totaled 724,934 cars, the Association of American Railroads announced on September 26. This was a decrease of 16,213 cars, or 2.2%, compared with the previous week; a decrease of 97,502 cars, or 11.9%, compared with the corresponding week last year; and a decrease of 88,786 cars, or 10.9%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended September 14 totaled 741,147 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS For the week ended Saturday, September 14			
District	1957	1956	1955
Eastern .....	111,612	127,419	126,482
Allegheny .....	142,899	156,248	154,524
Pacahantas .....	66,040	67,59	64,530
Southern .....	119,935	134,121	131,782
Northwestern .....	112,116	138,553	145,200
Central Western .....	123,962	134,574	133,611
Southwestern ..	54,583	61,973	61,055
Total Western Districts .....	300,661	335,102	339,916
Total All Roads	741,147	820,849	817,234
Commodities:			
Grain and grain products .....	46,537	54,372	54,133
Livestock .....	8,934	12,904	11,712
Coal .....	143,270	149,778	137,621
Coke .....	10,381	11,919	12,500
Forest Products .....	39,377	48,477	47,919
Oil .....	83,095	88,721	87,207
Merchandise l.c.l. .....	56,242	62,221	65,372
Miscellaneous .....	353,311	392,457	398,730
September 14 ..	741,147	820,849	817,234
September 7 ..	646,118*	679,631	701,972
August 31 .....	745,183	784,366	789,722
August 24 .....	759,140	770,413	787,272
August 17 .....	750,640	769,644	775,701
Cumulative total, 37 weeks ..	25,672,011*	26,526,046	26,298,117
* Revised			

**IN CANADA**—Carloadings for the seven-day period ended September 7 totaled 72,000 cars, compared with 121,290 cars for the previous ten-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
September 7, 1957 ..	72,000	28,728
September 7, 1956 ..	80,483	30,921
Cumulative Totals:		
September 7, 1957 ..	2,763,001	1,146,284
September 7, 1956 ..	3,009,306	1,198,233

## New Equipment

### FREIGHT-TRAIN CARS

► *Denver & Rio Grande Western*.—Ordered 300 70-ton hopper cars, American Car & Foundry Co.

### LOCOMOTIVES

► *920 New Units Installed in First Eight Months*.—Class I railroads installed 920 new locomotive units (916 diesel-electrics and four electrics), in this year's first eight months, compared with 1,032 units (all diesel-electrics), in comparable 1956 period, AAR reports; new locomotive units on order September 1 totaled 320 (290 diesel-electrics and 30 gas turbine-electrics), compared with 739 (712 diesel-electrics, 15 gas turbine-electrics and 12 electrics) on order September 1, 1956.

## New Facilities

► *Brazil Asks Tenders on Signal Equipment*.—Tenders for supply and installation of complete railway signal system for two sections of the Sorocabana, between Barra Funda and Ourinhos, are invited by the Secretary of Transportation and Public Works of the Brazilian state of Sao Paulos, says Foreign Commerce Weekly; bid deadline is 2 p.m., November 14.

► *Canadian Pacific*.—Let contract for construction of office building in Winnipeg for occupancy in autumn, 1958; providing 80,000 square feet floor space, building will be air conditioned and include lunch room at total cost of \$1.25 million.

► *Illinois Central*.—Directors have authorized an order for an International Business Machines Corporation type 705 electronic data processing machine; machine will be installed in about one year, when road has completed programming the accounting work machine will handle.

► *Missouri Pacific*.—Major projects underway or approved include (estimated cost in parentheses): provision of communication facilities in retarder yard (\$128,300), construction of superintendent's office, communication building, dormitory and restaurants (\$354,400) and construction of joint interchange yard with KCS and Milwaukee (\$103,000), all at Kansas City, Mo.; relocation of part of Jefferson Island branch because of construction of U. S. Naval Auxiliary Air Station (\$430,400); construction of joint Mopac-Cotton Belt tracks to serve International Paper Company, Pine Bluff, Ark. (\$723,800); transfer of CTC control office from Malvern to Hope, Ark., and consolidation of facilities at Gordon, Ark., to operate signal system (\$214,600); grade separation at St. Louis, Mo. (\$187,500); reconstruction of five bridges, at Curtis, Ark., Kelly, La., Buffville, Kan. and Kenefick and Taylor, Tex. (total \$212,490).

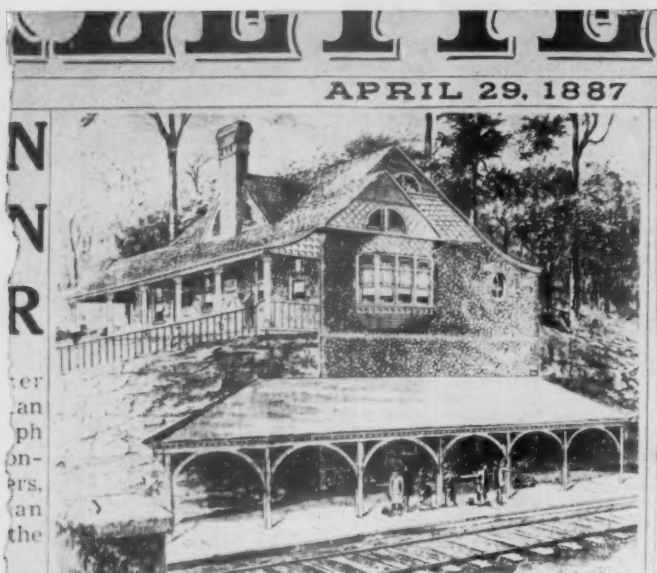
► *Southern Pacific*.—Will relocate main line trackage around 488-ft Tunnel 14, 14 miles south of Dunsmuir, Calif., at estimated cost of \$360,000; project, undertaken to provide greater clearances and eliminate frequent maintenance problems, is slated for completion by mid-January.

## Freight Operating Statistics of Large Railways—Selected Items

Region, Road and Year		Miles of road operated	Train miles	Locomotive Miles		Car Miles		Ton-miles (thousands)		Road-locom on lines				
				Principal	Light	Loaded (thous. sand)	Per cent loaded	Gross excl. locos & tenders	Net rev. and non-rev.	Serviceable	Unstored	Stored	5.0.	Per cent B.O.
New England Region	{ Boston & Maine.....	1957	1,560	217,596	221,695	7,593	8,731	63.6	589,144	239,490	83	1	3	3.4
		1956	1,562	242,246	247,804	9,930	9,265	66.8	606,209	253,053	70	1	1	1.4
		1957	1,739	266,081	266,131	16,050	11,221	64.7	737,390	302,543	85	13	13	13.3
		1956	1,746	270,144	270,144	22,393	11,848	66.6	762,722	314,621	83	8	8	8.8
	{ Delaware & Hudson.....	1957	771	161,477	166,271	6,139	8,777	67.8	629,312	331,675	38	2	5	5.0
		1956	792	177,719	182,501	6,072	9,428	71.5	645,061	340,081	42	1	1	2.3
		1957	927	250,598	258,728	19,888	11,946	68.0	787,635	346,131	65	1	1	1.5
		1956	962	306,704	319,759	26,316	12,816	68.9	849,960	377,625	62	1	1	1.6
		1957	2,207	585,262	589,077	15,360	32,374	67.5	2,074,974	825,197	169	2	1	1.2
		1956	2,225	592,455	599,298	19,277	32,969	68.9	2,061,685	825,622	168	3	1	1.8
Great Lakes Region	Grand Trunk Western.....	1957	951	209,132	217,485	1,634	6,987	59.3	500,613	189,598	54	13	18	21.2
		1956	951	277,267	281,259	1,873	8,585	58.7	623,235	249,654	56	1	16	21.9
	Lehigh Valley.....	1957	1,135	216,701	219,643	4,475	9,759	66.1	673,036	312,187	31	3	3	8.8
		1956	1,135	230,444	233,594	6,661	10,508	65.4	745,258	353,010	34	1	1	2.9
	New York Central.....	1957	10,570	2,070,844	2,093,631	106,768	92,736	59.1	6,815,288	3,009,242	425	4	45	9.5
		1956	10,565	2,450,679	2,494,165	109,166	100,001	60.9	7,259,983	3,257,571	562	6	73	11.4
	New York, Chic. & St. L.....	1957	2,155	688,041	702,165	5,407	29,207	64.3	2,071,597	920,428	181	9	17	7.7
		1956	2,154	763,211	785,274	8,076	31,375	65.1	2,277,609	1,031,183	178	23	23	8.3
	Pitta. & Lake Erie.....	1957	221	62,819	62,819	.....	2,918	67.1	255,063	159,486	13	1	1	7.1
		1956	221	71,242	71,242	.....	3,099	68.3	262,659	163,211	16	1	1	1.8
Central Eastern Region	Wabash.....	1957	2,379	509,285	511,942	5,899	23,177	64.7	1,546,957	599,519	110	1	2	1.8
		1956	2,381	510,728	512,783	5,556	23,335	65.6	1,541,803	602,929	111	1	1	1.9
	Baltimore & Ohio.....	1957	5,896	1,512,857	1,678,828	143,255	61,401	62.0	5,235,389	2,622,486	480	11	90	15.5
		1956	5,910	1,633,538	1,838,994	177,470	65,741	63.7	5,380,682	2,691,110	471	2	64	11.9
	Bessemer & Lake Erie.....	1957	208	64,612	68,468	284	3,456	60.6	409,804	265,796	15	1	1	1.1
		1956	208	66,707	71,178	196	3,517	57.5	426,542	272,032	18	1	1	1.1
	Central RR Co. of New Jersey.....	1957	612	121,464	122,700	6,792	4,711	64.1	364,473	191,948	66	3	4	4.3
		1956	612	133,978	134,872	6,166	5,096	66.4	387,572	207,305	67	4	4	12.9
	Chicago & Eastern Ill.....	1957	862	118,272	118,272	4,562	5,371	65.1	391,768	190,260	27	2	2	6.7
		1956	868	116,031	116,031	2,132	5,036	67.6	356,993	175,103	28	2	2	6.7
Poca-hontas Region	Elgin, Joliet & Eastern.....	1957	236	84,116	84,697	.....	2,612	64.5	212,740	117,799	37	2	4	9.3
		1956	236	91,870	92,253	.....	2,550	61.0	232,549	126,505	39	1	2	5.5
	Pennsylvania System.....	1957	9,902	2,793,220	3,009,391	233,660	126,040	65.8	9,394,900	4,618,121	815	50	206	19.2
		1956	9,892	3,058,119	3,267,581	246,324	134,931	66.7	9,823,218	4,797,285	857	342	28	28.5
	Reading.....	1957	1,303	357,427	359,825	12,425	13,333	62.6	1,112,658	601,463	167	20	6	6.1
		1956	1,303	333,808	335,927	11,193	13,534	66.3	1,079,771	592,766	159	2	23	12.5
	Western Maryland.....	1957	846	162,153	167,336	8,332	6,607	63.5	571,224	328,661	51	1	1	1.1
		1956	846	158,520	164,719	9,389	6,351	66.2	523,582	301,976	43	1	1	1.1
	{ Chesapeake & Ohio.....	1957	5,067	1,530,363	1,536,506	30,897	71,402	55.3	6,515,615	3,693,639	587	5	72	10.8
		1956	5,067	1,582,929	1,608,121	48,462	71,343	57.5	6,307,054	3,570,487	487	42	67	11.2
Southern Region	{ Norfolk & Western.....	1957	2,110	775,221	831,296	62,628	41,244	57.9	3,971,983	2,118,794	180	13	17	8.1
		1956	2,110	757,170	807,956	60,695	37,229	59.4	3,501,035	1,950,438	224	6	16	6.5
	Atlantic Coast Line.....	1957	5,283	763,100	763,112	9,087	23,613	56.3	1,772,639	749,836	131	5	5	3.7
		1956	5,278	870,506	870,524	10,185	26,196	59.8	1,898,603	828,002	196	6	3	3.0
	Central of Georgia.....	1957	1,730	185,924	185,924	1,949	7,735	66.2	556,598	271,276	34	2	2	5.6
		1956	1,731	214,442	214,442	2,273	8,148	68.3	570,112	276,830	34	1	1	2.9
	Gulf, Mobile & Ohio.....	1957	2,717	261,920	261,920	303	14,125	67.5	985,423	472,708	87	4	4	4.4
		1956	2,717	268,052	268,052	303	14,649	69.8	973,932	461,943	85	6	6	6.6
	Illinois Central.....	1957	6,503	1,087,132	1,087,132	30,710	47,064	62.0	3,471,829	1,618,797	248	64	66	11.6
		1956	6,532	1,176,537	1,176,665	33,719	48,500	63.2	3,534,944	1,660,291	323	5	127	27.9
Southern Region	Louisville & Nashville.....	1957	4,702	867,583	869,661	15,238	32,717	60.6	2,544,805	1,293,974	134	11	7	7.6
		1956	4,714	882,064	887,678	16,363	33,096	63.0	2,500,889	1,284,798	187	16	25	11.0
	Naah., Chatt. & St. Louis.....	1957	1,043	150,078	153,015	3,017	4,745	69.2	315,142	149,105	44	2	2	4.3
		1956	1,043	167,606	171,251	3,813	5,509	71.8	357,736	170,462	49	4	4	7.5
	Seaboard Air Line.....	1957	4,049	630,813	630,813	971	22,882	59.9	1,695,456	731,996	154	6	3	3.8
		1956	4,051	673,726	673,726	2,267	25,377	63.6	1,791,784	788,753	138	8	5	5.5
	Southern.....	1957	6,251	838,036	838,096	9,739	38,373	65.4	2,614,176	1,215,346	187	12	6	6.0
		1956	6,259	882,581	882,651	11,997	40,519	67.5	2,670,045	1,238,971	183	10	5	5.2
	Chicago & North Western (*).....	1957	9,252	859,084	859,084	8,779	29,700	63.1	2,229,565	891,000	180	2	12	6.2
		1956	9,344	867,564	868,398	11,186	34,967	63.7	2,532,532	1,062,957	184	6	3	3.2
Northwestern Region	Chicago Great Western.....	1957	1,437	129,968	129,968	1,660	6,955	68.5	475,253	221,619	30	2	2	6.3
		1956	1,437	131,608	131,608	179	7,233	66.6	496,049	224,403	32	1	1	1.1
	Chic., Milw., St. P. & Pac.....	1957	10,607	873,058	886,421	17,366	38,947	65.3	2,661,147	1,202,435	280	13	13	4.4
		1956	10,633	952,250	967,954	17,090	42,280	64.8	2,932,424	1,325,042	277	3	13	4.4
	Duluth, Missabe & Iron Range.....	1957	566	165,808	166,078	790	8,377	51.1	891,516	536,169	68	9	8	9.4
		1956	569	162,720	163,311	988	8,127	51.0	826,148	507,498	70	2	5	6.5
	Great Northern.....	1957	8,289	1,071,343	1,075,865	23,050	46,014	66.3	3,499,863	1,780,796	233	76	6	1.9
		1956	8,274	1,200,815	1,209,081	38,015	48,304	62.8	3,777,721	1,885,026	275	43	21	6.2
	Minneapolis, St. P. & S. Ste. M.....	1957	4,169	434,835	436,941	2,759	14,065	65.7	985,150	460,130	83	8	3	3.3
		1956	4,171	407,268	409,309	2,041	14,650	64.2	1,024,189	477,512	88	10	3	3.0
Central Western Region	Northern Pacific.....	1957	6,534	746,662	754,695	14,095	31,986	66.7	2,204,989	1,000,225	228	55	21	6.9
		1956	6,569	844,367	857,817	22,006	35,371	65.0	2,472,425	1,110,958	225	66	36	11.0
	Spokane, Portland & Seattle.....	1957	944	135,353	135,353	1,205	6,084	75.9	392,537	188,735	54	1	1	1.1
		1956	946	148,076	148,076	1,443	6,803	76.8	446,957	220,903	55	11	4	5.7
	Atch., Top. & S. Fe (incl. G. C. & S. F. & P. & S. F.).....	1957	13,172	2,578,316	2,702,765	67,733	124,738	65.2	8,486,643	3,137,262	594	19	77	11.2
		1956	13,124	2,610,094	2,710,473	91,875	123,515	64.2	8,458,228	3,068,786	570	44	46	7.0
	Chic., Burl. & Quincy.....	1957	8,750	983,100	979,096	21,606	43,702	66.4	2,980,216	1,331,334	146	39	31	14.4
		1956	8,771	1,031,069	1,027,308	23,164	46,958	69.0	3,092,803	1,380,228	203	46	39	13.5
	Chic., Rock I. & Pac.....	1957	7,576	975,275	974,611	2,377	38,504	69.8	2,826,713	1,157,609	174	5	12	6.5
		1956	7,580	1,025,366	1,020,650	1,880	40,470	61.4	2,9					

# For the Month of June 1957 Compared with June 1956

Region, Road and Year	Freight cars on line			Per Cent S.O.	G.t.m. per train-hr. excl. locos. and tenders	G.t.m. per train-mi. excl. locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
	Home	Foreign	Total										
<b>New England Region</b>													
Boston & Maine.....1957	1,919	8,237	10,156	1.5	40,267	2,714	1,103	27.4	792	45.4	5,117	14.9	101.3
1956	1,600	8,347	9,947	1.7	37,425	2,507	1,047	27.3	841	46.1	5,400	15.0	137.6
N. Y., N. H. & Hfd.....1957	3,075	15,150	18,225	2.0	43,945	2,771	1,137	27.0	567	32.6	5,799	15.9	118.7
1956	1,997	16,213	18,210	2.5	43,255	2,823	1,165	26.6	573	32.4	6,007	15.3	128.0
<b>Great Lakes Region</b>													
Delaware & Hudson.....1957	1,687	6,041	7,728	6.0	64,353	3,918	2,065	37.8	1,427	55.7	14,340	16.5	161.1
1956	1,425	6,076	7,501	4.6	63,359	3,647	1,923	36.1	1,509	58.5	14,313	17.5	161.1
Del., Lack. & Western.....1957	4,922	12,354	17,276	3.9	53,490	3,205	1,408	29.0	674	34.2	12,446	17.9	159.8
1956	3,164	11,964	15,128	2.5	48,789	2,817	1,252	29.5	824	40.6	13,085	17.6	202.7
Erie.....1957	8,860	19,670	28,530	3.0	70,589	3,582	1,425	25.5	979	56.9	12,463	19.9	132.2
1956	5,060	21,103	26,163	2.9	65,757	3,514	1,407	25.0	1,062	61.6	12,369	18.9	137.1
Grand Trunk Western.....1957	5,378	7,076	12,454	6.3	51,445	2,406	911	27.1	505	31.4	6,646	21.5	94.6
1956	4,054	8,379	12,433	8.9	49,713	2,275	909	29.1	654	38.3	8,751	22.0	137.7
Lehigh Valley.....1957	4,131	9,471	13,602	5.2	66,624	3,145	1,459	32.0	747	35.3	9,168	21.5	241.8
1956	6,663	7,682	14,345	4.3	67,757	3,299	1,563	33.6	777	35.4	10,367	21.0	249.1
New York Central.....1957	58,230	85,637	143,867	3.1	53,987	3,337	1,473	32.4	703	38.2	10,278	17.1	151.2
1956	49,543	93,715	143,258	3.0	50,517	3,012	1,352	32.6	757	38.2	9,490	16.4	168.3
New York, Chic. & St. L.....1957	8,567	17,189	25,756	8.1	53,983	3,065	1,362	31.5	1,209	59.7	14,237	17.9	125.7
1956	6,581	19,318	25,899	5.3	51,247	3,065	1,388	32.9	1,325	61.9	15,958	17.2	145.8
Pitts. & Lake Erie.....1957	4,277	8,840	13,117	8.2	61,431	4,073	2,547	54.7	405	11.0	24,055	15.1	153.4
1956	2,630	9,536	12,166	3.7	56,595	3,727	2,316	52.7	439	12.2	24,617	15.4	161.6
Wabash.....1957	9,486	10,257	19,743	4.4	65,915	3,046	1,180	25.9	1,022	61.1	8,400	21.7	162.7
1956	8,984	10,070	19,054	5.1	65,478	3,036	1,187	25.8	1,062	62.6	8,441	21.7	162.3
<b>Central Eastern Region</b>													
Baltimore & Ohio.....1957	48,756	46,087	94,843	5.2	53,108	3,522	1,764	42.7	887	33.5	14,826	15.3	110.7
1956	48,082	54,003	102,085	4.0	49,983	3,357	1,679	40.9	885	34.0	15,178	15.2	133.5
Bossmore & Lake Erie.....1957	5,414	1,105	6,519	7.1	106,942	6,548	4,247	76.9	1,525	32.7	42,596	16.9	162.1
1956	5,103	1,290	6,393	4.7	104,009	6,715	4,283	77.3	1,516	34.1	43,595	16.3	149.4
Central RR Co. of New Jersey.....1957	2,477	10,190	12,667	7.4	43,498	3,112	1,639	40.7	521	19.9	10,455	14.5	90.6
1956	2,135	10,637	12,772	7.0	41,209	3,025	1,618	40.7	531	19.7	11,291	14.2	96.2
Chicago & Eastern Ill.....1957	2,603	3,352	5,955	10.2	60,542	3,334	1,619	35.4	1,049	45.5	7,357	18.3	136.0
1956	2,469	4,036	6,505	6.5	53,251	3,087	1,514	34.8	996	42.4	6,724	17.3	138.6
Elgin, Joliet & Eastern.....1957	7,149	9,290	16,439	6.2	21,973	2,671	1,479	45.1	231	7.9	16,638	8.7	82.4
1956	6,412	10,246	16,658	4.7	19,788	2,655	1,444	49.6	250	8.2	17,668	7.8	101.7
Pennsylvania System.....1957	97,067	94,962	192,029	8.7	55,536	3,479	1,710	36.6	802	33.3	15,546	16.5	111.3
1956	94,086	99,205	193,291	5.5	54,111	3,312	1,617	35.6	823	34.7	16,166	16.8	106.8
Reading.....1957	12,015	21,426	33,441	2.5	51,567	3,113	1,683	45.1	598	21.2	15,387	16.6	74.3
1956	9,371	21,148	30,519	3.5	49,215	3,235	1,776	43.8	646	22.3	15,164	15.2	74.6
Western Maryland.....1957	4,535	4,261	8,796	2.4	52,788	3,619	2,082	49.7	1,277	40.4	12,950	15.0	130.9
1956	4,362	4,101	8,463	3.6	47,768	3,363	1,940	47.5	1,180	37.5	11,898	14.5	155.8
<b>Potomac &amp; Chesapeake Region</b>													
Chesapeake & Ohio.....1957	58,664	35,105	93,769	.8	82,181	4,286	2,430	51.7	1,333	46.6	24,299	19.3	85.1
1956	49,249	37,103	86,352	1.0	74,441	4,013	2,272	50.0	1,400	48.7	23,489	18.7	103.5
Norfolk & Western.....1957	35,738	11,413	47,151	.8	90,414	5,256	2,936	53.8	1,528	49.1	35,052	17.6	148.6
1956	32,112	10,063	42,175	1.0	80,975	4,760	2,652	52.4	1,540	49.5	30,813	17.5	127.2
<b>Southern Region</b>													
Atlantic Coast Line.....1957	20,443	16,403	36,846	4.4	44,534	2,325	984	31.8	673	37.6	4,731	19.2	206.7
1956	16,884	16,101	32,985	4.8	42,542	2,192	956	31.6	811	42.9	5,229	19.4	156.4
Central of Georgia.....1957	2,981	5,990	8,971	4.3	53,421	3,000	1,462	35.1	1,020	43.9	5,227	17.8	190.6
1956	2,231	6,794	9,025	3.9	47,501	2,665	1,294	34.0	996	43.0	5,331	17.9	226.0
Gulf, Mobile & Ohio.....1957	5,807	9,798	15,605	7.5	73,506	3,763	1,805	33.5	1,004	44.5	5,799	19.5	103.9
1956	4,402	10,796	15,198	5.8	70,188	3,637	1,725	31.5	1,021	46.4	5,667	19.3	106.8
Illinois Central.....1957	26,389	24,712	51,101	2.2	56,087	3,228	1,505	34.4	1,049	49.2	8,298	17.6	105.8
1956	24,598	27,071	51,669	1.6	52,954	3,046	1,430	34.2	1,089	50.4	8,473	17.6	95.7
Louisville & Nashville.....1957	25,748	15,639	41,387	4.5	52,372	2,939	1,495	39.6	985	41.1	9,173	17.9	220.1
1956	23,654	14,510	38,164	4.0	49,578	2,842	1,460	38.8	1,060	43.3	9,085	17.5	144.7
Nash., Chatt. & St. Louis.....1957	2,499	4,203	6,702	7.1	42,053	2,103	995	31.4	706	32.5	4,765	20.0	124.2
1956	3,383	3,910	7,293	4.7	41,723	2,137	1,018	30.9	780	35.1	5,448	19.5	121.6
Seaboard Air Line.....1957	13,211	11,628	24,839	2.6	52,423	2,748	1,186	32.0	932	48.6	6,026	19.5	150.9
1956	10,307	13,601	23,908	2.0	49,988	2,719	1,197	31.1	1,015	51.4	6,490	18.8	176.9
Southern.....1957	17,317	24,331	41,648	4.8	53,331	3,130	1,455	31.7	976	47.2	6,481	17.1	149.6
1956	15,403	23,093	38,496	3.0	52,441	3,035	1,408	30.6	1,036	50.2	6,598	17.3	135.4
<b>Northwestern Region</b>													
Chicago & North Western (*).....1957	21,594	27,288	48,882	6.2	47,872	2,627	1,050	30.0	620	32.8	3,210	18.4	161.0
1956	17,827	36,591	54,418	4.1	49,064	2,978	1,240	30.4	647	33.4	3,792	16.7	144.9
Chicago Great Western.....1957	1,905	3,727	5,632	3.6	68,098	3,663	1,708	31.9	1,270	50.2	5,141	18.8	141.3
1956	1,509	4,170	5,679	3.0	72,679	3,775	1,708	31.0	1,355	65.6	5,205	19.1	143.5
Chic., Milw., St. P. & Pac.....1957	31,624	29,140	60,764	5.9	58,966	3,058	1,382	30.9	669	33.2	3,779	19.3	110.1
1956	28,794	34,023	62,817	6.9	58,681	3,091	1,397	31.3	712	35.0	4,154	19.1	119.6
Duluth, Missabe & Iron Range.....1957	13,153	997	14,150	2.3	98,838	5,642	3,393	64.0	1,229	37.6	31,577	18.4	77.7
1956	13,654	766	14,420	1.8	90,487	5,417	3,328	62.4	1,156	36.3	29,730	17.8	85.1
Great Northern.....1957	23,678	19,222	42,900	3.2	60,407	3,319	1,689	38.7	1,370	53.4	7,161	18.5	125.7
1956	21,013	27,135	48,148	2.7	56,619	3,205	1,599	39.0	1,371	56.0	7,594	18.0	132.0
Minneap., St. P. & S. Ste. M.....1957	6,641	9,384	16,025	4.0	52,042	2,528	1,179	32.6	1,019	48.6	3,816	20.7	155.7
1956	6,641	9,384	16,025	4.0	52,042	2,528	1,179	32.6	1,019	48.6	3,816	20.7	155.7
Northern Pacific.....1957	20,026	15,533	35,559	3.2	59,083	3,962	1,343	31.3	934	44.8	5,103	20.0	89.6
1956	17,645	18,572	36,217	5.0	56,403	2,936	1,319	31.4	1,035	50.7	5,637	19.3	97.0
Spokane, Portland & Seattle.....1957	1,428	3,777	5,205	2.0	43,393	2,921	1,404	31.0	1,204	51.1	6,664	15.0	94.0
1956	1,310	4,260	5,570	3.3	43,716	3,038	1,501	32.5	1,388	55.7	7,784	14.5	83.9
<b>Central Western Region</b>													
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....1957	60,812	36,669	97,481	5.6	72,257	3,296	1,219	25.2	1,073	65.4	7,939	22.6	143.6
1956	57,030	40,662	97,692	3.1	74,270	3,251	1,179	24.8	1,072	67.2	7,794	22.3	149.5
Chic., Burl. & Quincy.....1957	19,991	22,536	42,527	3.7	64,273	3,041	1,359	30.5	1,055	52.2	5,072	21.2	161.7
1956	18,363	24,143	42,506	3.8	62,330	3,005	1,341	29.4	1,100	54.3	5,245	20.8	130.9
Chic., Rock I. & Pac.....19													



## NEW STATION UTILIZES ELECTRICAL DEVICES

NEW YORK, Apr. 29, 1887  
The obvious criticism of the new Glen Ridge station is the placing of the agent at the end of the building farthest from the track, where he cannot have visual notice of approaching trains; done, evidently for the comfort and pleasure of waiting passengers, affording them an airy room, with a romantic prospect from the bay window overhanging the cut.

But with the simple and

inexpensive electrical devices now so common this objection is largely obviated. Electrical annunciators are a great convenience at any station, and should be provided even where the agent has a good outlook; and where he does not have it they are doubly necessary.

The engraving of the station gives the correct idea of its outlines but black and white lines are hardly adequate

The romance of electricity and railroads started slowly—then grew in a rush. A single decade bridged the use of "simple and inexpensive" electrical devices to the introduction of major railroad power, lighting and control installations. And with each innovation Graybar was there—analyzing and helping to solve the electrical problems that are also railroad problems.

Sixty-five members of the Graybar sales staff specialize in railroad needs today. In communications, for instance, they'll be glad to work with you in the solution of any out-of-the-ordinary problem and furnish—without obligation—detailed installation recommendations, prices, specifications and such other data as you may require. And you can rely on the same experienced Graybar service in the fields of lighting, ventilation, power apparatus, control equipment and tools.

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553-2010

## People in the News



Frank L. Coulter  
Frisco



Patrick C. Mullen  
C&E

**CHESAPEAKE & OHIO.**—William R. Althans, general solicitor, C&O, elected regional vice-president, Central region, National Association of Railroad Trial Counsel.

**CHICAGO & EASTERN ILLINOIS.**—Harry Miller, formerly a traffic analyst for Standard Oil Company, Denver, appointed district freight agent, C&E, Denver, succeeding **Blaine Oakey**, named general agent, Minneapolis.

**Patrick C. Mullen**, assistant general solicitor, elected general counsel, Chicago, to succeed **David O. Mathews**, elected president (Railway Age, August 19, p. 13).

**FRISCO.**—Effective November 1, **Frank L. Coulter**, regional manager-sales, San Francisco, promoted to vice-president and executive general agent, New York, to succeed **E. G. Baker**, appointed to the newly created position of vice-president, Birmingham, Ala.

**ROCK ISLAND.**—Bruce Dwinell, vice-president and general counsel, Chicago, elected vice-president, executive department there. **Eaton Adams**, general solicitor, Chicago, elected to succeed Mr. Dwinell, and in turn is replaced by **Martin L. Cassell**, general attorney.

**SANTA FE.**—Effective October 1, **L. C. Hudson**, general freight agent, Chicago, appointed eastern freight traffic manager, New York, succeeding **F. H. Hemphill**, named freight traffic manager, Galveston, Tex. **F. J. Wright**, assistant general freight agent, Los Angeles, named to replace Mr. Hudson.

**SOUTHERN.**—James O. Reed, commercial agent, Houston, Tex., promoted to general agent there, succeeding **Milton Martin**, who retires October 1.

**UNION PACIFIC.**—R. J. Berti, assistant electrical engineer, Omaha, Neb., appointed electrical engineer there, to replace **D. G. Williams**, retired.

**George D. Schade**, first assistant general freight agent, Portland, appointed general freight agent, Northwestern district there, succeeding **Thomas J. Dowd**, who retired August 31. **John C. Stromberg**, second assistant general freight agent, named to succeed Mr. Schade, and in turn is replaced by **Robert W. Gill**, chief clerk, traffic department. It was erroneously reported in Railway Age, Sept. 2, p. 42, that Mr. Gill succeeded Mr. Schade.

**D. A. Wisse** appointed superintendent, reclamation plant, Evanston, Wyo.

## OBITUARY

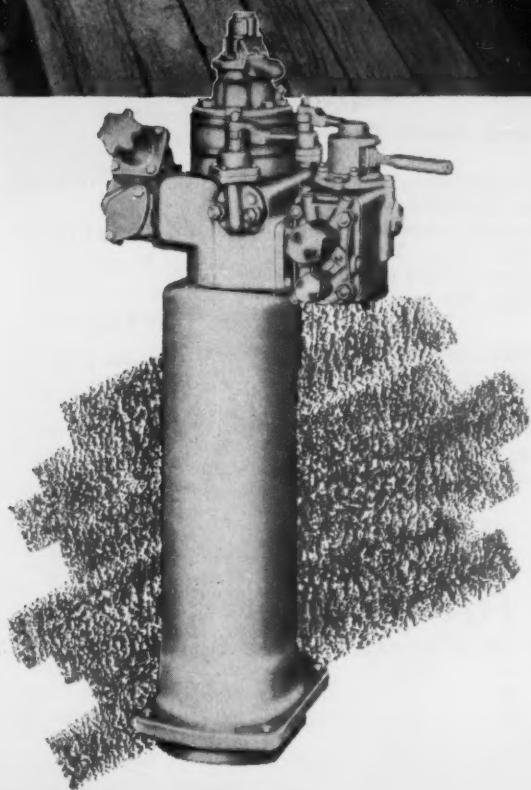
**James M. Nicholson**, 69, retired mechanical and research engineer, Santa Fe, Topeka, Kan., died August 25, in Topeka.

**S. M. Viole**, who retired in 1952 as assistant electrical engineer, Pennsylvania, died September 3 at Blowing Rock, N.C.

**Carl W. Dilli**, 63, assistant freight traffic manager, Southern, Washington, D. C., died September 21 at Doctors Hospital.



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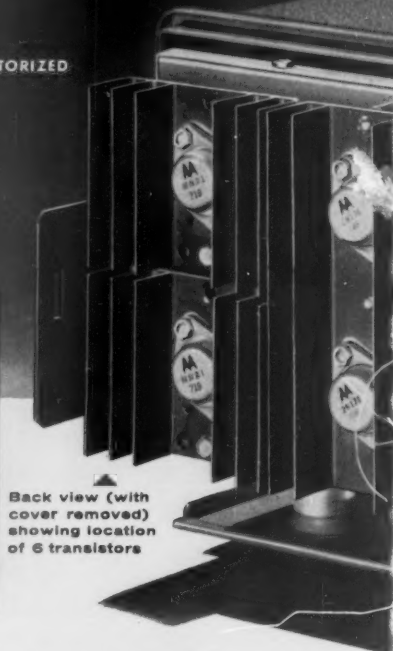
Westinghouse Air Brake  
COMPANY

AIR BRAKE DIVISION  WILMERDING, PENNA.

# NEW TRANSISTOR-POWER 64-VOLT STAN-PAC RADIO

TRANSISTORIZED VOLTAGE  
REGULATION

COMPLETELY TRANSISTORIZED  
POWER SUPPLY



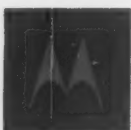
Back view (with  
cover removed)  
showing location  
of 6 transistors

## Long Life Transistors Replace the Vibrator... Reduce Maintenance and Dr

Motorola is first again to provide railroad radio equipment with lower maintenance and operating costs. New 64-Volt "Stan-Pac" radio features a transistorized power supply for *both* receiver and transmitter. There are no vibrators, expensive converters or rotary machines. That installation costs are lowered... maintenance is simplified... performed by the communications department alone. No separate crafts required to service one radio.

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**\$35,000**

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**REQUIREMENTS:**

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Experience—up through shops to top executive responsi-  
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heavy ordnance and heavy machinery.

Age about 48.

Big man physically, with demonstrated executive  
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Quarters in New York but willing to spend time  
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# Unionization Needs Limit

Craft unionism—the kind that prevails on the railroads—has a tendency to put obstacles in the way of necessary adjustments to changed conditions. The railroads already have all the handicaps (e.g., from regulation) they can stand, against adjusting themselves to changes — without suffering added union restrictions in this quarter.

It follows that railroad managements should resist the efforts now going forward further to unionize supervisory and staff positions. Such resistance implies no opposition to legitimate union objectives — it is in the long-run best interest of the unionists themselves.

Where employees of an industry are organized on an industry-wide basis, regardless of occupation or craft, the union is usually not particularly concerned with the interests of any one occupation. If boilermakers' jobs shrink while those of electricians increase proportionately, the "industrial union" would usually not offer much resistance to the change. But, where employees are organized on a craft basis, their unions are mainly concerned with the welfare of the craft—not that of employees as a whole.

Economic progress—the only basis for constantly increasing wages—*always* consists in securing more units of output per employee. If

you "freeze" wages, you otherwise reduce wages. To keep customers, Everybody employ

For employ that mechan they only a service would

As the re. doing tamping name— an incre needed censing the big

Cust. strict insuper to jobs in indiv output big mo ford to crucial of unio

**WELFARE OF SOME, OR OF ALL?:** Union railroads. But acceptance of short-sighted goals of well-wishers of the railway unions. The rail (tions) yielded, in this paper's opinion, much too—even in the long-run interest of the unionists. supervisory jobs and otherwise "freeze" the rail ing conditions should be resolutely resisted. Re hence may well be largely determined—either of this resistance.



## Railroads they serve

rubber, polyethylene, and polyvinyl chloride insulations, as well as the many protective coverings that insure efficient, trouble-free circuits.

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